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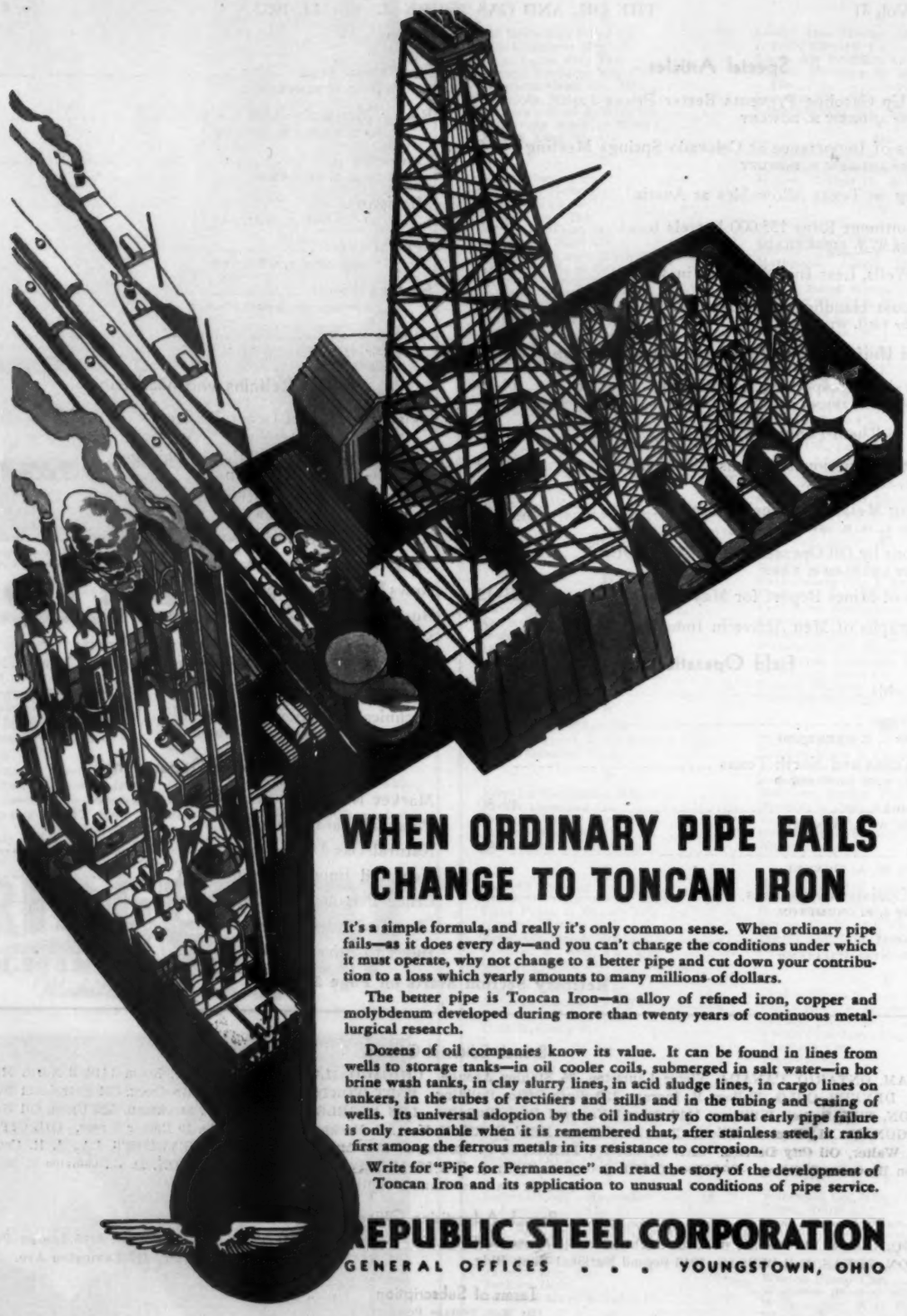

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Piling Up Gasoline in Storage Big Factor Which Handicaps Efforts to Get Better Price Level

By ANDREW M. ROWLEY

BELIEF is becoming more prevalent the petroleum industry definitely has turned the corner and is in a good position to solidify its gains and strengthen its foundation upon which to continue to build upward. Now is the time for constructive thinking and action upon the part of all elements in the industry. Probably 90 per cent of the troubles of the business have been due to selfishness and refusal or inability to view problems in any other light than that of prejudice or the immediate effect upon the interests of the individual company.

The smaller companies in the oil business are a most powerful influence and they can determine largely what the future of the business is to be. While there still exists in remote quarters the belief that the sole thought of the larger companies is to gobble up the little fellow, intelligent executives at the heads of the smaller companies realize the interests of all companies, large and small, are identical and that what is good or bad for one, is good or bad for the other.

Crude oil production is being and has been maintained at a level below requirements, permitting substantial withdrawals from storage. Crude oil producers realize their best interests necessitate a continuance of this condition and the industry has come to know the operators will co-operate in holding output to or below demands. This situation, ordinarily, would warrant far better prices but the fly in the ointment, as so often in the past, is failure of refiners to curtail their operations in line with conditions. As a result there has been an enormous piling up of gasoline in storage.

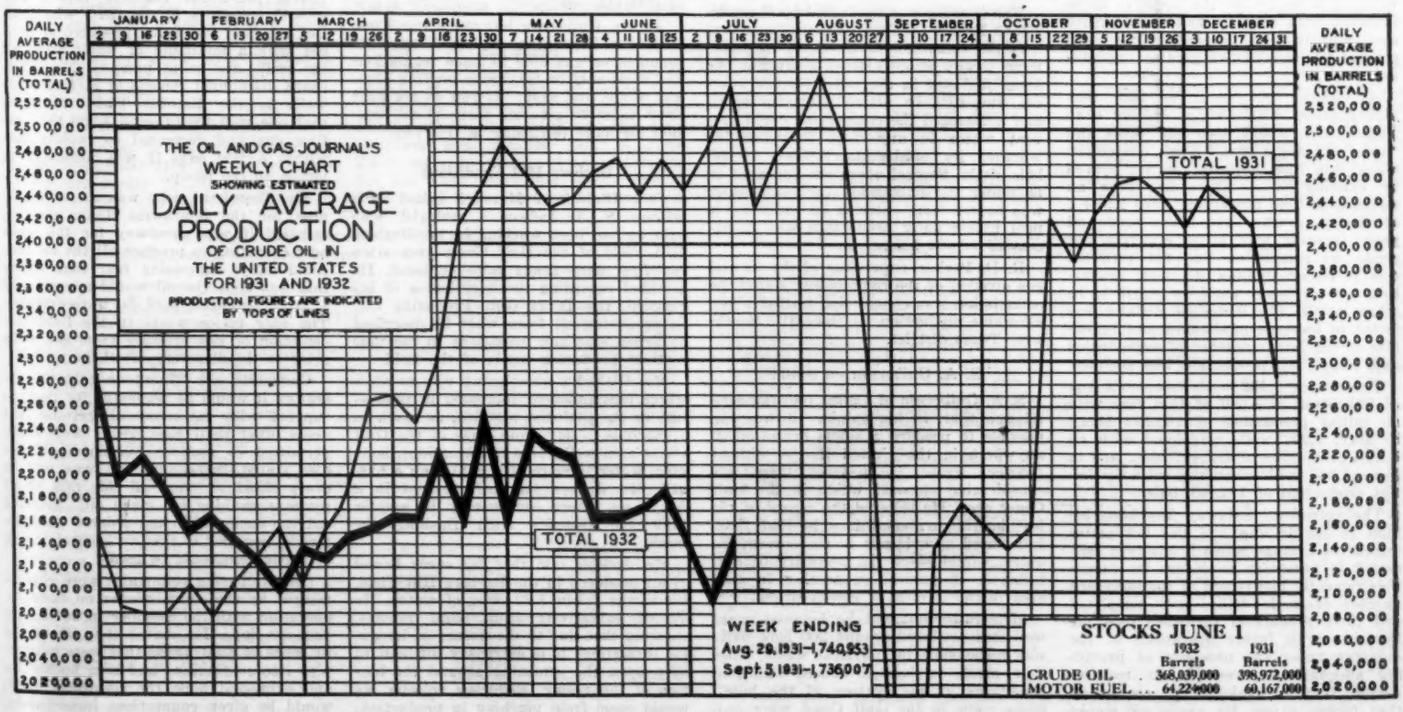
Whether it be right or wrong, the fact remains gasoline prices and weakness or strength in the gasoline market, determine to a very great extent the crude oil prices. Crude oil producers certainly have done their part in trying to stabilize conditions in the industry and they are entitled to better returns for their products as a result of their efforts. But their work has been partially nullified by the accumulation of gasoline in storage far in excess of quantities good business judgment on the part of refiners would permit.

Crude Oil Production in the United States

Estimated daily average production for the week ending July 9, and a comparison with previous week and one year ago, follows:

	July 9	July 2	July 11, 1931
Oklahoma—			
Oklahoma City	99,415	65,930	259,385
Seminole-St. Louis	112,490	109,415	136,710
Remainder of State	211,625	211,170	235,820
Total Oklahoma	423,530	386,515	631,915
East Texas—			
Lathrop	126,486	125,495	94,895
Kilgore	103,243	102,987	160,056
Joiner	106,179	104,524	126,588
Total East Texas	335,908	333,006	381,539
West Texas	178,612	179,206	206,001
North Central Texas	74,936	74,912	86,692
Texas Panhandle	51,257	54,925	58,640
East Central Texas	56,561	57,415	59,511
Gulf Coast Texas	113,325	110,643	125,390
Southwest Texas	59,011	57,731	63,038
Total State of Texas	869,610	867,838	980,811
Kansas	95,315	96,845	101,250
North Louisiana	28,705	30,190	33,770
Gulf Coast Louisiana	29,723	31,102	28,581
Arkansas	34,125	34,095	43,475
Eastern fields	119,000	120,000	107,000
Rocky Mountain area	82,191	80,429	92,528
California—			
Santa Fe Springs	59,000	57,500	62,000
Long Beach	69,000	67,000	76,000
Playa Del Rey	14,750	14,500	25,500
Elwood	14,000	13,800	26,150
Kettleman Hills	59,500	60,000	78,000
Remainder of State	251,750	238,700	252,000
Total California	468,000	451,500	519,650
Total United States	2,150,199	2,098,514	2,538,980

Increase, 51,685 Bbls. Daily



Matters of Great Importance to the Oil Industry Will Be Discussed at Colorado Springs

By ANDREW M. ROWLEY

Meetings, holding great possibilities of having a most important bearing on the petroleum industry, will be held at the Broadmoor Hotel, Colorado Springs, beginning Monday, July 18, and closing with a special meeting of the board of directors of the American Petroleum Institute at the same place on July 22.

Questions of paramount importance to the industry in general are being agitated for consideration at the Colorado Springs meeting. There has been a movement under way for some time to have the industry limit its withdrawals of crude oil from storage, meeting its refinery requirements by larger purchases of current production. It is estimated more than 200,000 bbls. of crude oil is being withdrawn daily from storage at this time.

The matter of better prices for crude oil producers has many adherents who are anxious to receive some reward and return for the sacrifices they have made to stabilize the production situation and hold the output of crude oil down to or below requirements. Prices are below the level which prevailed when production was higher and consumption less. A higher price level means better returns to all branches of the industry, with a resultant quicker return to normal employment and salary conditions. As has been said numerous times in these columns, all business must be conducted at a profit and no business will ever get to first base on a policy of selling its products at or below the cost of manufacture. The same condition holds true in the matter of producing crude oil and manufacturing gasoline and other refined products.

Matter of Price Level

There is a strong feeling among many leading executives of the petroleum industry that the present price level should be maintained and no effort made to increase it at this time. Their idea seems to be it is better for the industry to be satisfied with what it has accomplished and content with present prices until general business shows greater improvement.

A number of executives fear that higher prices will start a drilling campaign which would open new pools and "upset the apple cart." Their contention along this line, however, is not proved by existing facts. There has been an increase in field operations since April 1 of this year when the latest crude oil price increase was made effective but crude oil production has not reflected this increased drilling. In fact, production now is lower than on April 1. In other words, the increased drilling has failed to increase production and in the face of the larger number of wells drilled and completed, production has declined.

There were 1,132 wells completed east of California in April of this year with an initial production of 168,732 bbls.; in May, 1,292 wells completed with an initial production of 187,492 bbls., and in June, 1,343 wells completed with an initial production of 142,991 bbls.

The petroleum industry has been behind in its drilling and has not maintained the average which it has been estimated is necessary to insure its future requirements. The record of the increased number of wells drilled and completed and their production furnishes food for thought as to future operations of the industry under the necessity of providing adequate reserves for its requirements. It also weakens the contention that higher prices for crude oil would "drown the industry in a flood of oil" resulting from increased drilling.

Consider Unit Operation

Charles F. Roeser of Fort Worth, vice president of the Institute and chairman of the Division of Production, has called a meeting of the Committee on Production Practice and its working subcommittees to meet at the Broadmoor on July 18. Leading oil industry attorneys and petroleum and production engineers will meet at that time to consider questions relating to the "new conception" of drilling and development of oil and gas fields. Earl Oliver, of Ponca City, Okla., the leader in efforts to stabilize the petroleum industry through the program he devised of unit operation with returns to operators and owners based on the acreage content of pools, has been invited to attend the sessions of the committees at which this question will be discussed.

The intense interest evident throughout the country on this question of unit operation and the development of pools in such manner as to insure every property owner his ratable share of the oil and gas in the pool, regardless of where wells are drilled in the pool, is shown by the numerous communications received by Mr. Oliver and The Oil and Gas Journal on the series of articles Mr. Oliver has prepared and which have been published in The Oil and Gas Journal.

It is felt the production committees of the Institute will be able to submit a report to the directors at Colorado Springs outlining a program of future activities. These committees will hold meetings during the four days prior to the session of the board of directors.

A.P.I. Call for Meeting

The American Petroleum Institute sent out the following on the meeting: "Hope that proximity to the great oil producing regions of the Mid-Continent area and the Pacific Coast as well will attract nearly all of the seventy odd members of the board of directors of the American Petroleum Institute caused the selection of Colorado Springs, Colo., as a meeting place on July 22. In a call to the directors inviting their attendance President Amos L. Beaty of the Institute gave notice also that Charles F. Roeser of Fort Worth, vice president and chairman of the division of production has called a meeting of the committee on production practice and its working subcommittees at the same place on July 18. All sessions will be held at the Broadmoor Hotel.

"The production committee of the Institute have had a busy season and it is anticipated that after a four days' session they will be prepared to submit a report of accomplishments and a program of future activities to the directors."

East Texas Claim for Cuts in Other Districts Heard by State Railroad Commission

AUSTIN, Tex., July 11.—Demand for measurement of the other oil fields of the State by the same yardstick applied in the East Texas Field was made by an East Texas delegation today at a hearing before the Railroad Commission.

The hearings set were for the Yates, Gulf Coast and Southwest Texas Fields, but the Yates situation was left undiscussed, and testimony unfinished regarding the Gulf Coast.

The hearing was conducted by Commissioner Ernest O. Thompson who stated it was the commission's intention to determine if any waste existed in any of the areas included in the order for the hearing and to take action to minimize it, and announced the commission could prevent waste in any field regardless of whether its production reached 10,000 bbls. daily. Several operators appeared to be under the impression the commission was barred from entering an order for a pool unless daily production was in excess of 10,000 bbls.

R. D. Parker, supervisor of the oil and gas division of the commission, stated the commission was considering setting a top allowable production for the entire Southwest Texas district.

S. A. Gulberson on Stand

S. A. Guiberson of Dallas told the commission that, in his opinion, it was impossible to produce a single barrel of oil anywhere in the United States without physical waste. He believed there was considerable physical waste in the Gulf Coast area. He believed the record of the last hearing on conditions in that field, introduced as evidence in the current inquiry, would show the necessity of curtailment of present production in that area in the interest of conservation.

Mr. Guiberson said he believed every well that produced around 200 bbls. daily was responsible for physical waste, since that much production caused "unequal conditions at the bottom of the hole." Some wells in the Gulf Coast were producing over 2,000 bbls. of oil daily each. He believed the East Texas Field could produce 500,000 bbls. of oil daily without creating the same degree of waste that exists in other Texas fields with less production and he thought the "yardstick being applied to East Texas is too short." He said the commission ought to adopt a yardstick for East Texas that would be fairer to that area in comparison with the policy employed in prorating other fields. He gave it as his opinion Newell should be permitted to produce in excess of 200 bbls. daily.

As Mr. Guiberson left the stand, Commissioner Thompson explained that the commission was able to issue regulations and rules only on testimony proving physical waste, and said: "If you do not have these facts to give us, there is no occasion for more testimony in this vein."

Barbers Hill Conditions

Jack Blalock of Marshall called as a witness S. A. Judson, a geologist, who said he had been working in the Barbers Hill Field of the Gulf Coast area since the first deep sands were explored. He testified regarding the experiences of his concern, the Texas Gulf Producing Co., in producing oil from what he described as formations and conditions in the nine distinct producing sands of the field.

Mr. Blalock's questioning was to show water encroachment increased in producing, as the geologist testified, as much as 1,485 bbls. a day from some of the Gulf Coast area wells. Due to formations, however, water is more of a help than a hazard, Mr. Judson testified, "except in a few cases where coning may be greater than the benefits from flushing the sands."

Mr. Judson said that for every barrel of oil produced in the Barbers Hill Field, there was taken 1.82 bbls. of water. He quoted extensively from scout reports, showing that due to the nature of irregular formations it is extremely difficult to keep open the screening around the bottom of the casing. Reducing velocity, as would come from pinching in production, tends to clog screening, the geologist said. In answer to Major J. R. Parten, president of the Independent Petroleum Association, Mr. Judson said to cut back, in an experiment to try and avoid water causing by-passing of some oil pockets would be taking a sporting chance.

Escobas Pool Situation

Protest was entered against any curtailment in the Escobas Pool in Zapata County, Southwest Texas, by John Trenchard, petroleum engineer representing several operators in the field, who testified the field was being produced at present with a minimum of waste since all the wells are being pumped. Mr. Trenchard discounted reports of large flowing wells in the Escobas Field, testifying that one well that flowed 1,200 bbls. the first day had decreased so rapidly that within a few days it was necessary to put it on the pump.

Mr. Trenchard, who was the only witness for the Southwest Texas district, testified it was necessary for the wells now operating to produce all the oil they could daily, expressing fear that unless this was done the oil would migrate and a large potential pool be unrecoverable. The only major waste in the field was depletion of gas pressure from gas wells prior to the discovery of oil, he stated.

Commissioner Thompson told the operators it would be necessary for them to support with testimony allegations that areas other than East Texas were being permitted to produce too much oil. He also stated the commission was making every effort to "stop all this talk about someone running too much oil," pointing out the commission had ordered that meters be installed so that an accurate check of production could be made.

Oil purchasing companies were complimented by the commissioner on their cooperation with the commission during the past 10 days. He stated that 64 of the 91 wells in East Texas that were without pipe line connections had been hooked up and expressed hope the remaining wells would be given connections immediately.

Mid-Continent Refinery Crude Runs During July 155,000 Barrels Less Than Year Ago

By W. T. ZIEGENHAIN

During July the daily average crude runs in Mid-Continent refineries will be less than June by approximately 7,500 bbls. daily and less than a year ago by approximately 155,000 bbls. Converted to terms better known from a marketing standpoint, this means that 500 cars less gasoline is being offered daily by this group than just a year ago. As one refiner stated his reason for reducing his runs, he seemed to have expressed the general attitude when he said: "We have finally learned not to run three barrels when our orders call for two barrels."

A year ago Mid-Continent refiners were processing 588,000 bbls. of crude daily, paying less than 40 cents a barrel for the crude and getting less than 2½ cents a gallon for the gasoline. They were influenced to boost crude runs as a result of the promise of a favorable fall demand for gasoline and by the low cost of crude. The gasoline price advanced rapidly in August following increases in the crude price but after September 1 there was a general decline in the gasoline market and as the year closed gasoline was back down to 2½ cents. By that time crude had gone up to 75 cents and the refinery runs remained fairly high, averaging 456,000 bbls. for December.

Starting with January of this year, there has been an entirely different plan of operation revealed. At no time during the seven-month period from January 1 to August 1 will the runs equal even the low December schedule. It is natural that crude schedules be reduced compared to a year ago because of the lesser demand for gasoline, but it is very obvious that a reduction of 155,000 bbls. of crude runs is considerably more than would be suggested by the 5 to 10 per cent decrease in the domestic consumption of gasoline over the United States.

While a more complete analysis would have to be made to account for the loss of markets totaling 500 cars daily, it is not difficult to see that a year ago gasoline was being made almost without regard to the likelihood of profitably selling all of it, while now "gallonage without profit" is the antithesis of the spirit of the times.

Total Runs in Mid-Continent

The reduction in the total runs for the Mid-Continent area may be accounted for principally by small reductions made in a great number of plants rather than as the result of plants shutting down. Kansas refineries show the largest decrease in runs while reductions are also shown in the total runs of the refineries in Oklahoma, North Central Texas and Arkansas.

Refineries in the East Texas and West Texas area showed an increase in their total runs while the operations of the North Louisiana plants remained practically unchanged.

Oklahoma

Oklahoma refineries will process an average of 155,670 bbls. of crude daily during July, according to schedules established early in the month and this total compares with 159,600 bbls. in June. There were no plants added to the idle list nor were there any plants idle in June which were expected to resume operations in July. The Marathon Oil Co. continues to hold its Bristow plant inoperative while planning on the addition of a 3,000-bbl. topping unit and other equipment but actual work has not started. The 3,000-bbl. reforming unit under construction at the Empire Oil & Refining Co. plant at Ponca City is approaching the finishing stages and is expected to be completed within another month.

The operation of several Oklahoma City plants has been suspended for short periods during the past month due to heavy rains which at times flooded the yards. However, this trouble has not been serious enough to cause delays of more than a few days.

East Texas

The East Texas group of refineries will run a total of 18,600 bbls. daily during July and this schedule compares with 15,300 bbls. a month ago. The increase is accounted for by general increases being made almost throughout the list. No change has occurred in the status of the operating and shut-down plants although plans are being formulated to start up the 10,000-bbl. plant at Longview owned by the Petroleum Refractionating Co. Definite plans have not been formulated but the company is not only considering starting it up within another month but adding a cracking unit to handle the fuel oil and produce a motor fuel of higher octane value than the East Texas crude yields by natural distillation.

Some consideration is being given to starting up the Constantin Refining Co.'s plant at Overton and also the Slack Petroleum Co.'s plant at Willow Springs, but no definite plans have been revealed.

North Central Texas

The North Central Texas group of refiners will run 93,875 bbls. of crude daily during July compared with 97,455 bbls. a month ago. This decrease is also due to a general program of curtailing runs. The Iowa Park Producing & Refining Co. has temporarily suspended operations while the LaSalle Petroleum Co., operating a plant at Burkburnett, has resumed operations. The Waggoner Refining Co. has ordered general repairs for its plant and will add distilling and fractionating capacity to the present equipment.

West Texas

West Texas refiners have increased their total runs from 31,410 bbls. a month ago to 35,760 bbls. in July. One plant has been added to the list, namely, the Octane Refining Co., operating a 2,000-bbl. plant at Beard. Except for this addition, there is no change in the status of the operating and shut-down plants. The Bobrose Oil & Refineries is adding to the equipment at its Luling plant and when these revisions are completed the plant will have a capacity of 3,500 bbls. daily.

Kansas

Through a program of general curtailment the Kansas group of refineries has decreased the total runs for the state from 87,600 bbls. daily to 81,600 bbls. daily. The Sinclair Refining Co.'s plant at Argentine continues to be the only inactive plant in the state which has operated within the past year.

MID-CONTINENT REFINERY OPERATIONS

CRUDE RUNS TO STILLS

	1929	1930	1931	1932
January 1	508,550	535,460	478,795	405,910
February 1	506,800	519,355	470,125	411,280
March 1	514,950	531,500	449,634	401,155
April 1	530,530	555,250	497,391	419,750
May 1	577,500	574,300	510,640	436,160
June 1	583,030	572,250	567,915	440,765
July 1	565,800	548,475	588,840	433,255
August 1	555,250	526,400	590,545	.....
September 1	552,300	498,710	588,105	.....
October 1	544,720	518,800	472,190	.....
November 1	545,473	506,700	480,440	.....
December 1	540,630	478,360	456,525	.....

OPERATIONS BY DISTRICTS

District—	July 1 Dly. crude capacity (bbls.)	July 1 Dly. crude runs (bbls.)	June 1 Dly. crude runs (bbls.)	July 1 Dly. decrease (bbls.)
Arkansas	48,000	20,700	22,500	1,800
Kansas	153,500	81,600	87,600	6,000
North Louisiana	40,250	27,050	26,900	*150
Oklahoma	309,300	155,670	159,600	3,930
North Central Texas	204,000	93,875	97,455	3,580
West Texas	139,400	35,760	31,410	*4,350
East Texas	79,800	18,600	15,300	*3,300
Total	974,950	433,255	440,765	7,510

*Increase.

REFINERY OPERATIONS IN WEST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Bluebonnett Oil Refining Co., Wickett	5,000	(*)	(*)
Bobrose Oil & Refineries, Luling	2,500	2,000	600
Burford Oil Co., Pecos City	6,000	1,500	(*)
Coltex Refining Co., Colorado	10,000	3,500	3,500
Cosden Oil Co., Big Spring	15,000	5,200	5,000
Grayburg Oil Co., San Antonio	6,000	1,000	1,000
Great West Refining Co., Big Spring	8,500	(*)	(*)
Gulf Refining Co., Sweetwater	5,000	4,000	4,000
Howard County Refining Co.	2,500	(*)	(*)
Humble Oil & Refining Co., San Antonio	5,000	1,610	1,650
Humble Oil & Refining Co., McCamey	15,000	(*)	(*)
Magnolia Petroleum Co., Luling	5,000	2,000	2,000
Marathon Oil Co., Del Rio	5,000	1,500	1,500
Mieko Refineries, Inc., Laredo	1,500	850	850
Motor Fuel Products Co., Laredo	2,000	(*)	(*)
Octane Refining Co., Beard	2,000	1,500	.....
Paramount Refining Co., San Angelo	1,500	500	600
Pasotex Petroleum Co., El Paso	14,000	3,500	3,500
Phoenix Refining Co., Pettus	800	600	600
Pioneer Oil & Refining Co., Somerset	1,500	1,000	1,000
Richardson Refining Co., Big Spring	6,000	(*)	(*)
Rio Grande Oil Co., El Paso	6,000	1,000	1,000
Signal Gasoline Co., Texon	500	(*)	(*)
The Texas Company, San Antonio	3,000	2,500	2,500
The Texas Company, El Paso	2,000	500	500
Tonkawa Petroleum Co., Pyote	5,000	(*)	(*)
Texas Mexican Oil & Refining Co., Laredo	600	400	400
Texas Petroleum Products Co., Somerset	1,500	600	600
Wickett Refining Co., Wickett	2,500	500	560
Total	139,400	35,760	31,410

*Shut down.

NORTH LOUISIANA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Bayou State Refining Co., Hosston	750	350	(*)
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	18,700	18,400
Spartan Refining Co., Shreveport	10,000	6,000	6,000
Stanolind Oil & Gas Co., Superior	3,500	2,000	2,500
The Texas Company, Shreveport	7,000	(*)	(*)
Total	40,250	27,050	26,900

*Shut down.

REFINERY OPERATIONS IN KANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Altitude Petroleum Corp., Chanute	5,000	†100	(†)
Barnsdall Refineries, Inc., Wichita	4,000	2,200	4,000
Derby Oil Co., Wichita	7,500	4,000	4,000
Eldorado Refining Co., Eldorado	4,500	3,200	3,000
Golden Rule Refining Co., Wichita	1,500	900	900
Kanotex Refining Co., Arkansas City	12,000	6,000	6,500
National Refining Co., Coffeyville	6,500	5,000	5,000
Philips Petroleum Co., Kansas City	7,500	6,500	6,500
Shell Petroleum Corp., Arkansas City	22,000	10,000	13,000
Sinclair Refining Co., Coffeyville	12,000	11,000	11,000
Sinclair Refining Co., Argentine	9,500	(*)	(*)
Skelly Oil Co., Eldorado	23,000	12,200	12,200
Standard Oil Co. of Kansas, Neodesha	20,000	6,000	6,000
Vickers Petroleum Co., Potwin	3,500	2,500	2,500
White Eagle Oil Corp., Augusta	15,000	12,000	13,000
Total	153,500	81,600	87,600

*Shut down. †Cracking 2,900 bbls. daily of topped crude in addition during July.

(Continued on Next Page)

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Allstate Refining Co., Tamil	2,000	500	600
American Refining Properties, Wichita Falls	6,000	(*)	(*)
Archer Refining Co., Megargel	1,500	(*)	200
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	2,500	3,500
Dale Oil & Refining Co., Electra	4,000	(*)	(*)
Dobrose Oil & Refineries, Brownwood	2,000	(*)	(*)
Dixon Creek Oil & Refining Co., Kings Mill	3,500	900	900
Empire Oil & Refining Co., Gainesville	5,000	2,000	2,500
Falls Refining Co., Wichita Falls	2,000	1,000	200
Gratex Refining Co., Graham	500	150	150
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Humble Oil & Refining Co., Breckenridge	2,000	(*)	(*)
Humble Oil & Refining Co., Chilton	4,000	500	650
Humble Oil & Refining Co., Neches	5,000	1,625	1,625
Iowa Park Producing & Refining Co., Iowa Park	2,500	(*)	300
Kent Refining Co., Minerva	2,000	300	350
Kent Refining Co., Angus	4,000	200	150
LaSalle Petroleum Co., Burkburnett (Noble)	3,500	200	(*)
Macmillan Petroleum Co., Isom	5,000	(*)	(*)
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	1,200	1,200
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	5,000	5,400
Magnolia Petroleum Co., Corsicana	5,000	4,500	4,500
Marathon Oil Co., Fort Worth	5,000	3,800	4,000
Muenster Refining Co., Muenster	200	(*)	(*)
Olney Oil & Refining Co., Olney	2,500	1,600	1,500
Oriental Oil Co., Dallas	5,000	1,500	1,500
Panhandle Refining Co., Wichita Falls	5,000	2,700	2,700
Petroleum Refractionating Co., Pampa	6,500	5,000	5,000
Phillips Petroleum Co., Isom	18,000	19,000	19,000
Phoenix Refining Co., Inc., Dallas	2,000	600	.....
Primrose Refining Co., Wichita Falls	2,500	(*)	(*)
Shamrock Oil Co., Sunray	4,000	(*)	400
Sinclair Refining Co., Fort Worth	5,000	2,500	2,500
Simms Oil Co., West Dallas	4,500	3,000	3,000
Southland Refining Co., Olney	1,000	200	170
Seymour Refining Co., Seymour	250	(*)	(*)
Star Refining & Producing Co., Fort Worth	1,500	700	750
Superior Refining Co., Tiffin	2,000	(*)	(*)
Taylor Refining Co., Taylor	6,000	1,500	1,400
Texman Refining Co., Wichita Falls	2,500	2,000	2,950
The Texas Company, Dallas	16,000	14,000	15,000
The Texas Company, Amarillo	4,000	2,000	2,000
Tidal Western Refining Co., Burkburnett	3,000	(*)	(*)
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,500	2,500
Texas Pacific Coal & Oil Co., Caddo	1,000	500	600
Waggoner Refining Co., Electra	3,400	2,500	3,000
Wilcox Oil & Gas Co. (Pampa Refining Co.), Pampa	4,000	(*)	(*)
Young Refining Co., Archer City	250	(*)	(*)
Total	204,000	93,375	97,455

*Shut down.

REFINERY OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Altitude Petroleum Corp., Oklahoma City	3,000	600	700
Anderson-Prichard Oil Corp., Cyril	5,000	3,000	3,000
Barnsdall Refineries, Inc., Barnsdall	6,000	3,700	4,000
Barnsdall Refineries, Inc., Okmulgee	10,000	2,400	3,500
Bell Oil & Gas Co., Grandfield	4,500	1,800	2,200
Black Gold Refining Co., Oklahoma City	1,500	700	750
Capital City Refining Co., Oklahoma City	2,500	150	150
Century Petroleum Co., Tulsa	500	(*)	(*)
Century Petroleum Co., Oklahoma City	2,500	1,000	1,000
Champlin Refining Co., Enid	16,000	8,500	8,500
Continental Oil Co., Sapulpa	10,000	1,500	1,800
Continental Oil Co., Ponca City	30,000	12,000	11,500
Cushing Refining & Gasoline Co., Blackwell	1,200	1,000	1,000
Cushing Refining & Gasoline Co., Cushing	3,500	2,500	3,000
Deep Rock Oil Corp., Cushing	10,000	10,000	10,000
Eason Oil Co., Enid	5,000	2,000	2,000
Empire Oil & Refining Co., Okmulgee	4,000	3,300	3,500
Empire Oil & Refining Co., Ponca City	12,000	8,000	8,000
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,200	2,200
Globe Oil & Refining Co., Blackwell	7,500	6,500	6,500
Gulf States Oil Corp., Oklahoma City	3,500	700	700
Johnson Oil Refining Co., Cleveland	6,000	4,500	4,500
Major Oil Co., Oklahoma City	2,000	200	200
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	19,000
Marathon Oil Co., Boynton	3,500	1,500	1,700
Marathon Oil Co., Bristow	5,000	(*)	(*)
Phillips Petroleum Co., Okmulgee	5,000	5,000	2,500
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	4,000	4,000
Pure Oil Co., Ardmore	5,000	2,400	2,400
Pure Oil Co., Muskogee	9,000	7,000	7,000
Rock Island Refining Co., Beckett	5,000	4,180	4,500
Sinclair Refining Co., Sand Springs	8,000	2,300	2,300
Sterling Refining Co., Oklahoma City	2,000	650	650
Sun Oil Co., Yale	5,000	2,000	3,500
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	4,000	4,000
The Texas Company, West Tulsa	15,000	9,000	10,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	1,500	2,000
Tidal Refining Co., Drumright	15,000	8,000	9,000
Western Oil Corp., Beckett	2,000	(*)	(*)
White Oak Corp., Allen	3,000	(*)	(*)
Wilcox Oil & Gas Co., Bristow	5,000	2,500	3,500
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,890	2,000
Yale Oil Corp., Yale	2,000	700	500
York Refining Co., Oklahoma City	3,000	300	250
Total	309,300	155,670	159,600

*Shut down.

REFINERY OPERATIONS IN EAST TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Arrow Refining Co., Overton	2,500	1,000	800
Beacon Oil & Refining Co., Henderson	2,500	1,000	950
Boone Refining Co., Arp	500	1,000	700
Central Refining Co., Friars Switch	10,000	(*)	(*)
Constantin Refining Co., Overton	3,000	(*)	(*)
Diamond Refining Co., Overton	3,000	600	450
East Texas Refining Co., Henderson	6,000	(*)	(*)
East Texas Refining Co., Longview	10,000	7,000	7,000
Gladetex Refining Co., Gladewater	500	450	400
Gladewater Refining Co., Gladewater	1,000	250	250
Guillory Refining Co., Kilgore	200	(*)	50
V.O.B. Refining Co., Gladewater	500	550	550
Kilgore Refining Co., Kilgore	1,500	900	850
Overton Refining Co., Overton	3,500	1,000	900
Petroleum Refractionating Co., Longview	10,000	(*)	(*)
Sinclair Refining Co., Camps Switch	5,000	1,250	1,200
Southern Oil Refining Co., Kilgore	2,500	1,000	450
Slack Petroleum Co., Willow Springs	2,500	(*)	(*)
Taylor Refining Co., Tyler	15,000	2,600	750
Total	79,500	18,600	15,300

*Shut down.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs July 1	Runs June 1
Berry Asphalt Co., Waterloo	2,000	2,000	1,800
Henry H. Cross Co., Smackover	8,000	4,000	4,000
Houston Oil Co., Camden	6,000	(*)	(*)
Kettle Creek Refining Co., Pearson	5,000	1,500	1,800
Lion Oil & Refining Co., El Dorado	12,000	4,700	4,000
Macmillan Petroleum Products Co., Norphlet	2,000	2,000	2,000
Ouachita Valley Refining Co., El Dorado	2,000	1,000	1,300
Root Refining Co., El Dorado	10,000	4,000	6,000
Simms Oil Co., Smackover	3,000	2,500	2,500
Union Asphalt Co., El Dorado†	.....	.....	.....
Total	48,000	20,700	22,500

*Shut down. †Reduces residuum purchased from Lion Oil & Refining Co., no crude run.

More Oil Producers But Smaller Initial Production in June Completions

Fifty-one more wells were completed in June in the fields east of California than in May, and of the total, 1,343 completions, the number of oil wells was 976. The oil wells completed in May numbered 957, and their total initial production was greater than the June oil wells. In rigs and wells drilling at the close of both months there was little difference. The East Texas Field was the most active area in the country and there was practically no letup in the orgy of drilling in that biggest of all fields.

Following is the summary of the June operations:

SUMMARY OF ALL FIELDS

	Wells Completed			
	Comp.	Prod.	Dry	Gas
Eastern	125	468	24	21
Central Ohio	21	107	7	5
Lima	11	212	1	5
Indiana	11	310	4	3
Michigan	13	5,795	3	0
Kentucky	42	1,068	13	2
Illinois	0	0	0	0
Kansas	44	12,948	15	2
Oklahoma	74	30,617	28	5
North Central Texas	127	4,128	78	2
E. Cent. and E. Tex.	628	39,008	10	0
East Texas gas field	1	0	1	0
West Texas	22	1,773	8	1
Panhandle Texas	20	6,261	2	3
Gulf Coast	66	16,215	33	2
Southwest Texas	72	8,277	42	3
North Louisiana	32	9,005	16	5
Arkansas	7	0	7	0
Mississippi	6	0	3	3
Montana	2	10	1	0
Wyoming	1	300	0	0
Colorado	5	8	4	1
New Mexico	3	6,454	1	0
Utah	1	25	0	0
Total June	1,343	142,991	301	66
Total May	1,292	137,492	258	77
Difference	51	44,501	43	11

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	60	136	196
Central Ohio	19	66	85
Lima	2	14	16
Indiana	3	70	73
Michigan	59	74	133
Kentucky	7	62	69
Illinois	1	20	21
Kansas	54	117	171
Oklahoma	131	335	466
North Central Texas	58	146	204
East Cent. and East Texas	323	390	713
East Texas gas field	4	27	31
West Texas	18	92	110
Panhandle Texas	14	43	57
Gulf Coast	7	127	134
Southwest Texas	23	140	163
North Louisiana	64	70	134
Arkansas	7	25	32
Mississippi	1	16	17
Alabama	1	4	5
Montana	18	61	79
Wyoming	18	76	94
Colorado	10	65	75
New Mexico	8	48	56
Utah	0	17	17
Total June	910	2,241	3,151
Total May	858	2,284	3,142
Difference	52	43	9

TEXAS CONSERVATION DIRECTORS IN SESSION

FORT WORTH, Tex., July 8.—Directors of the Texas Oil and Gas Conservation Association in session here Thursday reiterated their plea for the strict enforcement of all laws and rules designed to prevent the waste of oil and gas in all Texas fields, and again pledged their support to the Railroad Commission and the enforcement officers in seeing that all such laws are strictly applied.

The action was embodied in a resolution declaring that the organization "favors the strict application of the laws of Texas with respect to the prevention of the waste of oil and gas in all fields in Texas, and the strict and prompt enforcement of all orders, rules and regulations to that end."

"The association," the resolution stated, "again expressed its offer to support the Railroad Commission and all enforcement officers in such a program, and particularly offers its support with reference to the hearing on July 11 as to the fields covered by the call therefor."

Call for the meeting referred to was issued following the complaint of East Texas operators that East Texas was being discriminated against in that production there has been constantly reduced while other fields are enjoying a much higher per well barrelage. The directors of the Texas Oil and Gas Conservation Association took the stand that if any waste exists in the fields referred to and covered by the call for the July 11 hearings, such waste should be minimized or eliminated.

Present at Thursday's meeting were: Charles F. Roeser, president, Fort Worth; E. H. Eddleman, executive vice president, Fort Worth; George Morgan, San Angelo; J. R. Pearson, Tyler; A. C. Smith, Wichita Falls; L. E. Barrows, Fort Worth; Frank P. Zoch, San Antonio; W. L. Todd, Dallas; J. G. Pew, Dallas; A. M. McCorkle, Fort Worth; D. H. Bolin, Graham; E. G. Allen, Dallas; H. A. Eklund, Tyler; Don Emery, Amarillo; Jake Hamon, Tyler; E. L. Smith, Corsicana; J. H. Clark, Fort Worth; Joe M. Weaver, Eastland; E. A. Landreth, Fort Worth; R. H. Morrison, Dallas; J. D. Collett, Fort Worth; M. G. Cheney, Coleman; W. A. Moncrief, Fort Worth; J. P. Shannon, Fort Worth, and Robert E. Hardwicke, Fort Worth.

OIL INDUSTRIAL EXHIBIT YEAR-ROUND SHOW PLACE

The Oil Industrial Exhibit is conducted at 307 South Cincinnati Avenue, Tulsa, by the Purchasing Agents Association of Tulsa, whose membership is made up largely of oil company buyers in the Tulsa area. Meetings of the association are held semimonthly. The Petroleum Motor Transport Association, composed of heads of automotive departments of major oil companies, also meets in the exhibit rooms.

The exhibit is open daily throughout the year to provide information to oil men and as a civic feature. Owing to the character of the sponsoring organization, the exhibit is managed on a non-profit-making basis for its educational and advertising value. For more than 10 years this establishment has been a show place for manufacturers and distributors of equipment used in the production, refining, marketing and transportation divisions of the oil industry. It is the outgrowth of a natural demand for a place where such equipment can be seen and studied. It is advantageous to sellers, buyers and users. Representative companies in various parts of the country maintain displays of their products.

Gulf Coast Area Has Enormous Facilities for Handling Crude Oil and Refinery Products

By NEIL WILLIAMS

HOUSTON, Tex., July 11.—The advantages of water transportation readily accessible and furnishing convenient outlet to the markets of the world have caused to be built up on the Gulf Coast one of the largest, if not the largest, oil concentration points in the country. Now, with its enormous refineries, vast tank farms and many deepwater loading terminals, the district is capable of absorbing hundreds of thousands of barrels of petroleum daily.

The importance of the Gulf Coast as an oil-dumping ground was brought to particular attention during the height of the East Texas production period last summer. In the rush which took place to dispose of the rapidly mounting production incurred by a vigorous development program, this district sitting right at the doors of the field, furnished a natural solution to a problem of congestion.

The great trunk pipe line systems from all parts of the Mid-Continent and Southwest converging at tidewater and needing only comparatively short feeders to serve the area, as well as the nearness of the coast making possible the laying of additional direct lines, permitted the taking out of large quantities of crude. Had it not been for these systems already in and the availability of the coastal facilities for handling large volumes of oil, it is probable that a drastic curtailment of development would have been forced and there might have been another story to tell of the world's greatest field. Certainly, if the laying of much longer and greater amounts of pipe had been required to furnish an outlet, so many companies would not have been so eager to make connections with the field, and the large pipe line capacity, now available, would not have been provided, at least not so quickly and easily.

Expansion on Coast

On the other hand, this movement of East Texas oil to the coast has resulted in additional expansion of crude carrier systems into the Gulf Coast, enlargement of refining facilities here and growth of oil shipping terminals. This has made the coast a still greater factor as a point of accumulation and clearing of petroleum than ever before.

During the period of development of East Texas prior to the military shutdown a total of 17 pipe lines, not including loading rack and local lines, having a combined daily capacity of approximately 800,000 bbls. were laid out of the East Texas Field. Of these, 15 lines, representing a daily capacity of more than 700,000 bbls., have outlet at some point on the Gulf Coast. While only four of these lines are complete new systems, these have a daily capacity of 190,000 bbls. This, with the increases in capacity of several of the already existing trunk systems to handle the new East Texas oil, has given the Gulf Coast approximately 220,000 bbls. daily additional incoming pipe line capacity. The remainder of East Texas' pipe line outlet capacity of 800,000 bbls. is through lines which made connection with already existing trunks, and, the output being absorbed by the latter, does not boost the amount of oil which can be brought into the coast.

Although the East Texas Field now is under proration with its daily production restricted far below its rated potential and much under the capacity of its outlet facilities, the Gulf Coast district continues to serve as the outlet for the greater part of the output. On the coast, this oil is readily absorbed along with the hundreds of thousands of barrels of oil which pour into this area each day from all over the Mid-Continent and Southwest to find its way to the markets of the world, either in its crude state or as refined products from the large plants in this area.

Pipe Line Capacity 1,160,000 Bbls.

With the new lines from East Texas, the Gulf Coast now has over 1,160,000 bbls. daily of incoming pipe line capacity, exclusive of lines and systems originating in the coastal district itself. The latter lines, including only those which are separate entirely from those major systems coming from outside the coast but at the same time adding their flow to the accumulation of oil at coastal refineries and terminals, number 12 having a daily capacity of 247,000 bbls. In addition to this, large volumes of oil and refined products can be brought in by tank cars, and in the cases of certain fields on the coast the oil is barged to refining and terminal centers.

The pipe line capacity from outside areas finding outlet at some coastal terminal or tank farm represents a total of 22 separate trunk systems operated by 12 companies, listed as follows:

Company, from, to—	Bbls.
Atlantic P. L., W. Tex., Atreco	35,000
Atlantic P. L., E. Tex., Atreco	30,000
Gulf P. L., Okla.-N. Tex.-Pan. W. Tex.-E. Tex.-Darst Creek-N. La.-Ark., Port Arthur	100,000
Humble P. L., N. Tex.-Pan.-W. Tex.-E. Tex., Webster	115,000
Humble P. L., W. Tex., Ingleside	90,000
Humble P. L., Laredo dist., Ingleside	10,000
Humble P. L., Luling-Darst Creek, Webster	20,000
Magnolia P. L., Okla.-N. Tex.-W. Tex.-Pan.-E. Tex., Beaumont	110,000
Magnolia P. L., N. La.-Ark.-E. Tex., Beaumont	70,000
Magnolia P. L., Laredo dist., Beaumont	20,000
Prairie P. L., Mexia dist. and north, Smiths Bluff	35,000
Pure Van P. L., Van-E. Tex., Smiths Bluff	45,000
Shell P. L., W. Tex., Houston	35,000
Shell P. L., E. Tex., Houston	40,000
Standard P. L., Okla.-Ark.-N. La.-E. Tex., Baton Rouge	105,000
Stanolind P. L., N. Tex.-E. Tex., Houston	35,000
Sun-Yount Lee P. L., E. Tex., Beaumont	45,000
Texas P. L., W. Tex., Port Arthur	40,000
Texas P. L., Okla.-N. Tex.-Pan.-E. Tex., Port Arthur	50,000
Texas P. L., N. La.-Ark.-E. Tex., Port Arthur	60,000
Texas Empire P. L., E. Tex., Port Arthur	70,000
Total	1,160,000

Coastal Pipe Lines

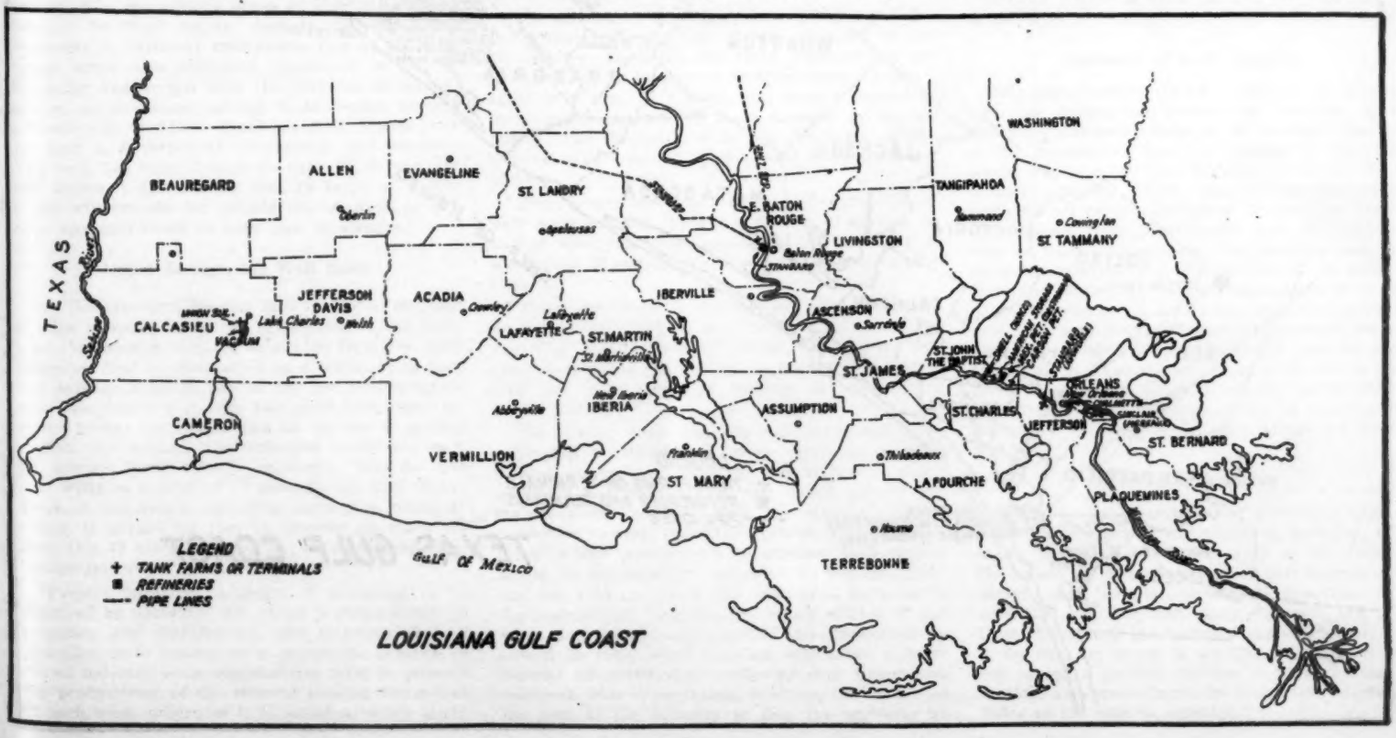
Among the coastal individual pipe line systems which also add to the oil accumulation in the area are:

Company, from, to—	Bbls.
American Pet. Co., Hull, Norsworthy	10,000
Atlantic P. L., Refugio, Harbor Isln'd.	50,000
Atlantic P. L., Barbers Hill, Cedar Bayou	15,000
Gulf Coast P. L., Saxet, Corpus Christi	20,000
Humble P. L., Pettus, Ingleside	50,000
Humble P. L., Humble, Baytown	20,000
Humble P. L., Moss Bluff-Barbers Hill, Baytown	15,000
Sinclair Tex. P. L., Damon Mound, Houston	12,000
Texas P. L., Markham, Houston	20,000
Texas P. L., Vinton, Port Arthur	10,000
Yount Lee P. L., High Island, Beaumont	25,000
Sun P. L., Humble, etc., Beaumont	20,000
Total	247,000

Four Main Districts

This crude coming into the Gulf Coast concentrates into four main districts, in which nearly all the refineries and terminals and main tank farms are grouped. These are located according to deep water channels, including the Houston-Texas City-Galveston district, the Beaumont-Port Arthur or Sabine district, the Corpus Christi-Harbor Island district, and the New Orleans-Baton Rouge or Mississippi River district. In an accompanying map is shown the locations of the various refineries, tank farms and terminals with the respective pipe lines which feed into them.

The extent to which oil can be moved



out of the coast is indicated in the capacities of the various terminals and loading docks which total approximately 551,300 bbls. hourly, or at the rate of 13,231,200 bbls. daily. Naturally these terminals are not operated 24 hours daily but only when there are boats to lift cargoes. Of the 551,300 bbls. hourly capacity, 328,300 bbls. is crude oil and 223,000 bbls. refined products. These capacities are distributed as follows:

District—	No. of terminals	Capacity Crude*	Refined*	Total*
Houston-Texas City-Galveston	13	110,300	90,000	200,300
Sabine	13	90,000	70,000	160,000
Corpus Christi	4	70,000	9,000	79,000
Mississippi River	8	58,000	54,000	112,000
Total	33	328,300	223,000	551,300
Total†	..	7,879,200	5,352,000	13,231,200

*Barrels per hour. †Barrels per day.

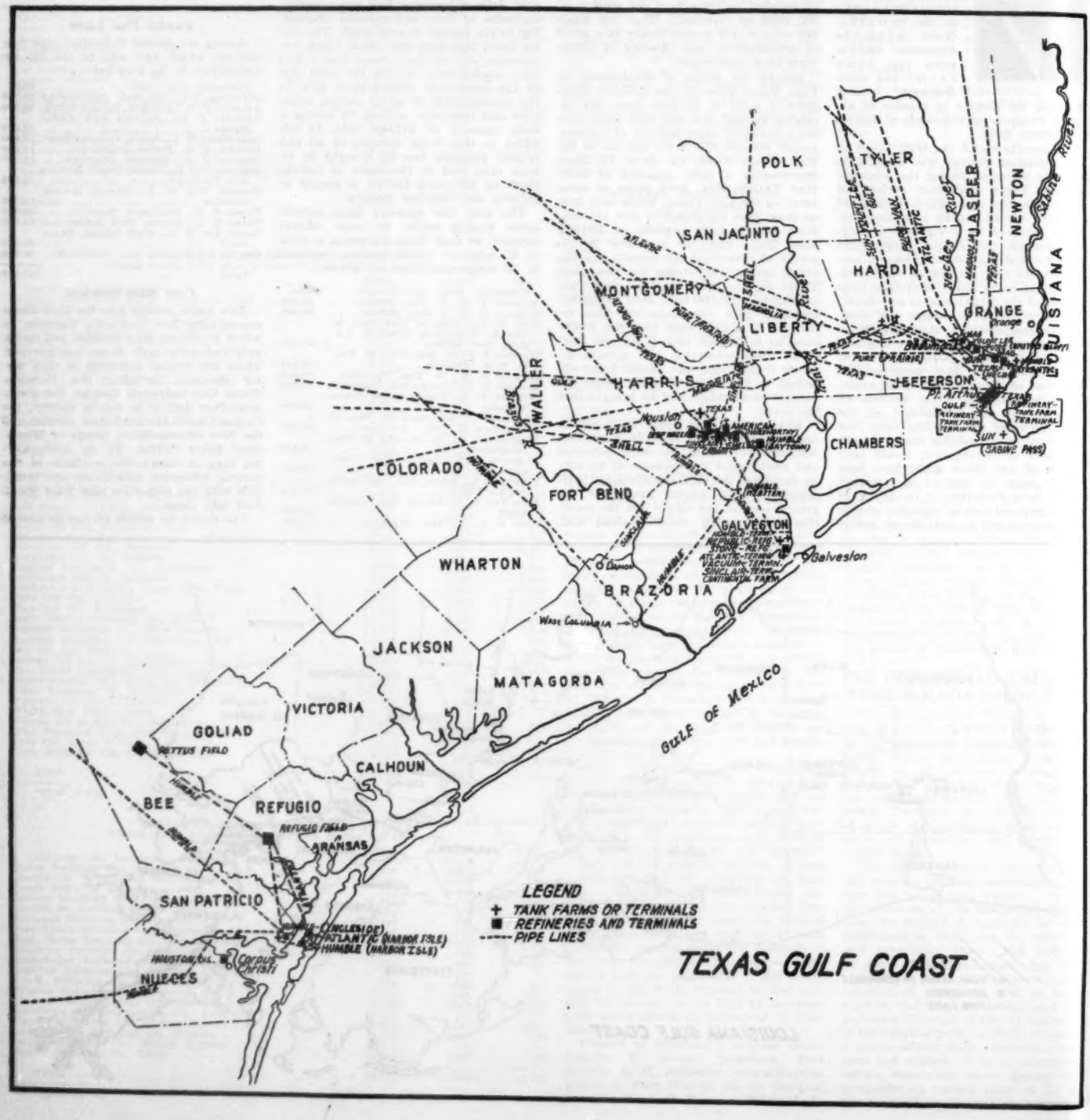
Sabine District

In the above, the Sabine district includes not only that group of terminals and refineries along the Neches River and Sabine Lake from Beaumont to Port Arthur but also the Lake Charles area where Magnolia Petroleum Co. and Union Sulphur Co. each has terminal facilities for handling crude produced in nearby fields. This oil can be moved either directly into the Gulf of Mexico by way of Calcasieu River and Calcasieu Lake or by canal through Orange to the large refineries and tank farms of the Beaumont and Port Arthur district.

Of the 22 pipe line systems coming into the Gulf Coast from outside areas, only one has outlet on the Louisiana Coast, that being the main line of the Standard Pipe Line Co. with terminus at Baton Rouge where the Standard Oil Co. of Louisiana has its large refinery. Other terminals and refineries in the Mississippi River district are served exclusively by tank car and boat. It is out of several of these terminals that large volumes of refined products are shipped, these products coming by tank car mainly from the Mid-Continent. The refineries in the area operate chiefly on crude brought in by boat either from some Texas coast terminal or from Mexico or Venezuela.

On the Gulf Coast there are 22 refineries, including several small local plants. These plants, of which 3 have a capacity of more than 100,000 bbls. daily each, 5 a daily capacity above 50,000 bbls. each, and 11 a daily capacity above 20,000 bbls. each, have a combined capacity of 690,150 bbls. daily. These refineries alone, on this basis, are able to handle nearly half the total amount of crude which can be brought into the coast by pipe line. In addition, these plants have a daily cracking capacity of 506,500 bbls. With storage facilities at these refineries and at the various terminals and associated major tank farms totaling approximately 46,000,000 bbls. and with an additional 10,000,000 bbls. storage at smaller scattered tank farms and in the various fields and at pump stations, this district is capable of handling most any amount of crude which it is possible to dump. According to the latest reports, which were as of May 1, there was a total of approximately 21,300,000 bbls. of crude actually in this storage.

Gulf Coast terminals at present are loading approximately 645,000 bbls. of oil daily, including both crude and refined products. Shipments during April, the latest available figures, totaled 19,408,601.63 bbls., of which 9,254,574.94 bbls. consisted of crude and 10,154,026.69 bbls. refined products. During the first four months of 1932, a total of 74,606,543.30 bbls. of oil, of which 33,286,191.07 bbls. was crude, was lifted. Shipments during the entire year of 1931 were 127,237,673.86 bbls. of refined products and 90,334,054.55 bbls. of crude, or a grand total of 217,571,728.41 bbls. of oil.



Lack of Any Uniformity in Rules and Regulations Covering Proration Handicaps Operators

Widespread interest is being manifest in the program devised by Earl Oliver of Ponca City, Okla., for stabilization of the petroleum industry. His articles in The Oil and Gas Journal have drawn the attention of leading legal, engineering, educational and production authorities in the United States to this subject and a number of universities such as Yale, Michigan and others have made and are making detailed studies of the questions involved. The subject is of especial interest at this time in view of the meeting to be held next week in Colorado Springs of the committees on production practice of the American Petroleum Institute. Prominent attorneys and petroleum engineers from various sections of the United States, interested in unit operation and its various phases and problems, will hold meetings in Colorado Springs starting July 18. They expect to make a report on the subject to the board of directors of the Institute when the latter meets July 22.

A. H. Rowan, president of the Rowan Drilling Co. and president of the Rowan & Nichols Oil Co. of Fort Worth, states a pertinent fact in connection with the matter in a letter to The Oil and Gas Journal. He says: "It is inconceivable to me that after four years of proration in Texas that every new field that is brought in is prorated on a different basis and I might add that there is no set rule or formula for the guidance of the petroleum industry in working out its proration problem." Operators in Texas, particularly, have been confronted with this problem and they have no way of telling under what rules or regulations or formula they will be permitted to produce wells when these wells are completed.

Mr. Rowan's letter on the question follows:

"I am very much interested in the proposed program for stabilization of the petroleum industry submitted in the various issues of The Oil and Gas Journal by Earl Oliver, and in the published comments by different individuals. One of the men whose letter was published apparently is not in sympathy and accord with the program presented, and as an argument against it, he makes certain references to the East Texas oil field. I note that he used a hypothetical proposition and assumes 'one well has been drilled on each 20 acres.' He also states 'I am 100 per cent in favor of a law which will provide for ratable taking of oil or gas from any pool based on some unit of acreage.'

Urged Acreage and Well Basis

"At the proration hearing held in Austin on June 21, this company made the proposition to the Railroad Commission that the allowable from the East Texas oil field be distributed on a combination well and acreage basis in lieu of the per well basis at that time and now in use. The gentleman above referred to was the first person on his feet to protest against this method. The inference is obvious, as I am advised from reliable authority, that he has four wells on a total of 17 acres in the East Texas Field, or one well to each four acres plus, which of course is permitting him to produce as much oil from this 17 acres as is being produced from some 80-acre leases.

"Present operating methods, if continued to be practiced by operators, are bound to bring defeat to proration and stabilization. We maintain that if proration is to remain as a permanent practice in the oil industry, some consideration must be given to the productivity of the mineral bearing formations of each lease, otherwise it is bound to wreck itself.

"It is inconceivable to me that after four years of proration in Texas that every new field that is brought in is prorated on a different basis and I might add that there is no set rule or formula for the guidance of the petroleum industry in working out its proration problem. In California, Oklahoma and Texas, different methods are being used, each of which may have its virtues, but none of which is subscribed to unanimously.

Wants Associations to Act

"I have suggested to the vice president of the American Petroleum Institute in charge of drilling and production practices, that this matter be given immediate consideration so that some formula can be devised whereby as nearly as is humanly possible the oil underlying each man's lease shall be allotted to him under the scheme of proration in effect in that particular pool. I have also suggested that he call upon the American Association of Petroleum Geologists and American Institute of Mining Engineers and request them to appoint committees for the study of this identical subject and that the views of these three great bodies be correlated so that some concrete basis may be presented to the industry as a whole. I believe that the combined thought of these three societies would have great weight with the conservation bodies of the various states and also would be accepted by the great majority of the operators in the oil industry."

Views of W. N. Davis

W. N. Davis, vice president of the Phillips Petroleum Co. and president of the Mid-Continent Oil and Gas Association, makes the point that the movement proposed by Mr. Oliver would have to be very liberally supported financially but that the economic welfare of the petroleum industry is of sufficient importance to justify such a major movement and all that it might cost. Mr. Davis expresses his views on the subject as follows:

"The articles by Mr. Oliver form a comprehensive and illuminating analysis of the problems of the oil industry. He holds that these problems can not be solved except by new or modified laws. In this I agree with him, as I think also does a constantly increasing percentage of those engaged in the industry. The difficulty is in the character of the legislation needed, and on this point there are many opinions.

"True, nearly everyone believes in the principle of unit operation, but there is a variety of opinion as to just what that term means and the character of legislation, if any, which should be enacted to promote it.

"There are those in the industry who are ready to accept laws making it a public utility; and on the other hand, there are those who oppose any new or modified legislation, on the ground that it will inevitably result in making the industry a public utility.

"Mr. Oliver says that the legislation which he contemplates would not mean increased governmental supervision, but on the contrary would eliminate the need for it and would permit the several states 'to hand back the operation of oil properties to their respective owners.' I think legislation which was certain to produce such results would be unanimously supported by the oil industry, but I do not think that such laws have, up to the present time, been drafted. In my opinion, if and when they are, the complexities and difficulties involved in their administration will make a large amount of government authority and supervision essential. This is no reason, however, for failure on the part of the industry to face the problems involved and to attempt to work out and secure the legislation which offers the most promise of solving these problems.

Should Support Movement

"Mr. Oliver is right in declaring that a broad and far-reaching program of education of many classes of citizens is essential to the successful attainment of the right legislation, and it might be added, equally necessary to prevent the enactment of the wrong legislation. His conception of a central special organization composed of representatives of all classes, to initiate and carry on this educational program, would involve a major movement of large proportions, and it would have to be very liberally supported financially. However, the economic welfare, not to say survival, of a twelve to fourteen billion dollar industry of far-reaching influence in the economic welfare of every other industry in the country, is of sufficient importance to justify such a major movement and all that it might cost, if it appears to hold reasonable promise of resulting in the right legislation.

"Very important progress has already been made in the education of the oil industry, Federal and state governments, the press, and, to some extent, the consuming public. Personally, I am in favor of continuing the educational work and the effort to develop and secure the right legislation. I must admit that it is not altogether clear in my mind as to just what that legislation should be in all of its details, and this I take it would be the task of the special organization contemplated by Mr. Oliver."

Federal Oil Board Comment

E. S. Rochester, secretary of the Federal Oil Conservation Board, in a letter to The Oil and Gas Journal, says: "Mr. Oliver makes a clear analysis of the entire problem and there can be no doubt that if stabilization is ever to be visited upon the industry many of the suggestions advanced by Mr. Oliver must be accepted. Your editorial is sound. Public interest certainly demands that the conglomeration of irritating issues be smoothed out as soon as possible."

Comment of E. G. Seubert

That the Standard Oil Co. (Indiana) is in accord with the stabilization program is indicated by the following statement from E. G. Seubert, president of the company: "You are working at something worth while in the best interests of all in the oil industry. As Mr. Oliver suggests, the change can probably not be brought about without concurrence and support from governments and the public, as well as from oil operators. The question may well be asked whether any attempt should be made to force the matter by formal organization of a campaign, or whether it would not be better to let the new idea gain popular acceptance through the natural process of voluntary discussion that is already taking place. Your article and editorial are in themselves evidence of the drift toward better thinking on oil production problems which is manifest also nowadays in articles in publications of general nature."

Views of Engineer

Lester C. Uren, professor of petroleum engineering of the University of California, Berkeley, Calif., says: "I have followed the work of Mr. Oliver in the promotion of his concepts of unit operation, and believe that his plan is entirely practical. I feel sure that you will find many engineers and executives throughout the industry supporting this view. I, for one, am happy to see The Oil and Gas Journal taking a decided position in favor of unit operation, and promoting it by such editorials and articles as the ones in question."

Geophysical Prospecting in Gulf Coast District Had to Overcome Many Difficulties

By W. P. JENNY
Geologist and Geophysicist, Dallas, Tex.*

If we consider that the great success of the geophysical methods in the Gulf Coast has been achieved practically during their infancy, we may expect a broad future to lie before these methods.

The development of the geophysical methods had to overcome many difficulties. There occurred a large number of geophysical failures, which are attributable to the methods as such, or to the accompanying circumstances. A deep-seated salt dome, for example, could hardly be discovered by the seismic method if the salt core did not penetrate appreciably through the high velocity shale beds; many geophysical locations were the indirect result of leasing conditions.

The main difficulty lay probably in the circumstances that during the first few years only a few geologists had sufficient knowledge of mathematics and physics to be of vital assistance to the physicists and engineers, who, on their part, mostly lacked an adequate knowledge of geologic conditions.

From this circumstances arose most of these mistakes, which we may term as personal and which have not yet altogether been eliminated.

Averaging of Gradients

A good number of dry hole on gravimetrical "minima" or "maxima" have sufficiently exemplified the necessity of combining the geological knowledge with the purely physical investigations of a certain area. As long as the geophysicist thought that along the Gulf Coast he was working above several thousand feet of practically homogeneous beds, any irregularity in a gradient picture had to be brought into connection with a salt dome.

For years the elementary knowledge of an irregular distribution of gravels in the shallow Lafayette-Lissie beds had been overlooked or not duly taken into consideration for the explanation of uncertain anomalies in the gradient picture.

Considering that a deep dome gives a gradient picture with but small changes in the length and direction of not too distant gradients, whereas the shallow gravel beds of the Lissie create more localized irregularities of the gradient, it stands to reason that in averaging up 3-5 neighboring gradients we should get rid of local irregularities and obtain a clearer picture of the deeper structures.

A number of failures were drilled on "maxima" or "minima" with hardly any closure, and even a good deal of the little closure shown was artificially constructed through an intentional adjustment of the isogams.

Figure 1 shows three examples of a first and revised interpretation of three prospects, which should illustrate on just how much geophysical dope some of the wells were drilled.

In Areas 1 and 2 abnormally large curvatures (which are not shown in the picture) in the general neighborhood of the "maximum" and "minimum" respectively, proved also independently the result of the averaging up of the gradients, namely that the gravimetric "maximum" and "minimum" were caused by shallow influences, most probably by shallow inhomogeneousness in the Lissie gravels.

The dry hole in Area 1 was drilled on a "maximum"; the revised interpretation shows that a possible deep minimum exists with its center about one mile to the east. The maximum disappears almost completely.

The great irregularities of the gradients in Area 2 made a second survey advisable. The averaged gradients of the second survey show a general northward tendency as a result of the salt flight due to a known dome farther south, but no irregularity in the gradients of any importance is perceivable.

The two dry holes of Area 3 were drilled on torsion balance results, which already by their original interpretation show a very doubtful closure about 1½ miles to the east of the holes and a still more doubtful closure between them.

Area 2 may be considered as definitely condemned by the torsion balances. But

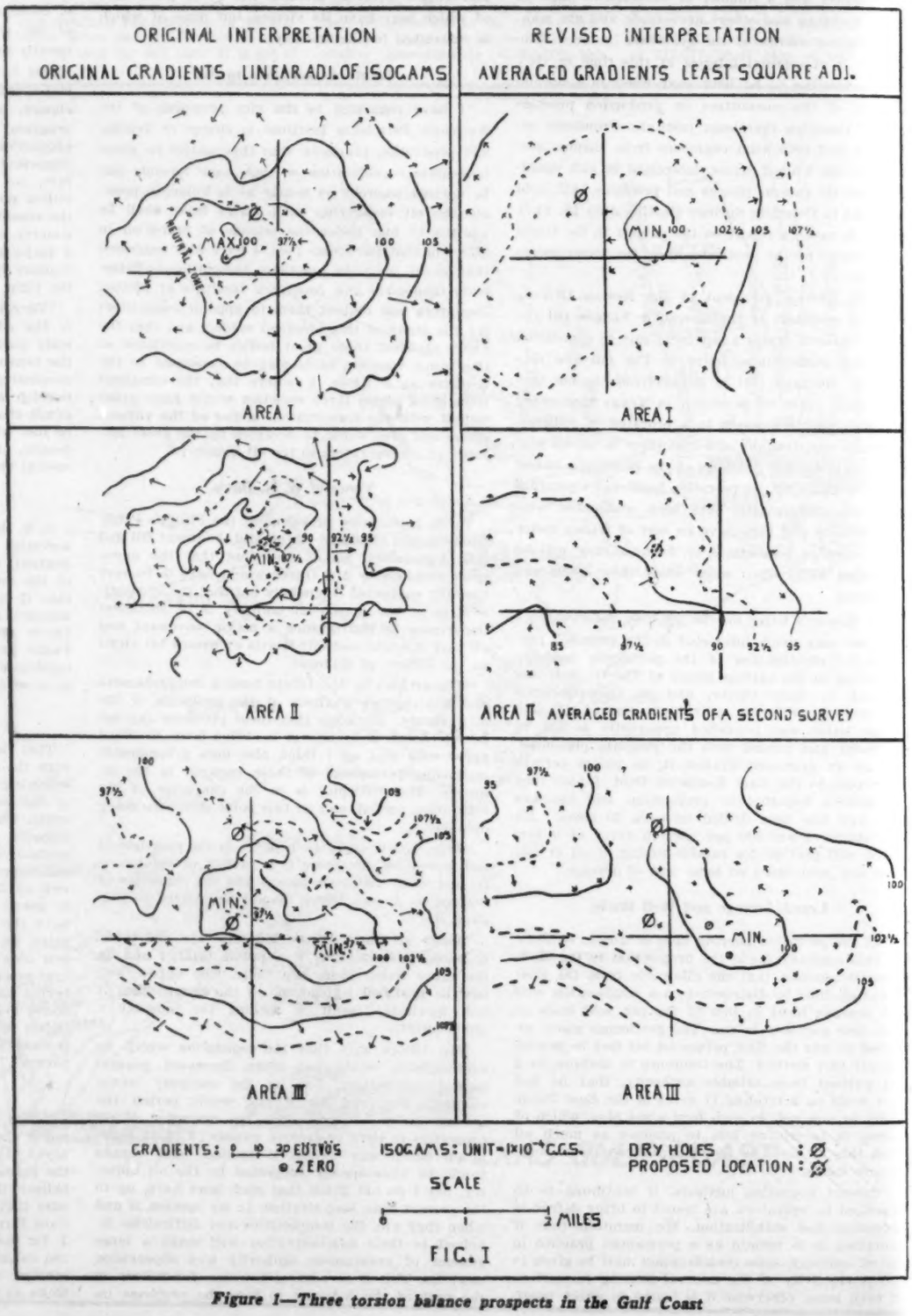


Figure 1—Three torsion balance prospects in the Gulf Coast

*Torsion balance data released for publication through the courtesy of Magnolia Petroleum Co., Dallas, Tex.

Whether motorists this summer burn as little gasoline as some people fear or as much as all of us hope, there won't be enough Dubbs cracked gasoline

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though it would be two much of a risk to recommend a well on either Area 1 or 3, it would probably be worth while to do some reflection work in these two areas. In the first area, reflection work might give some evidence of closure of the beds in commercial depth above the very deep salt plug, the existence of which seems probable from the torsion balance picture; in the third area reflection work might, though against gravimetric probability, yield some evidence of a salt plug near the weak minimum of the revised interpretation.

Comparing Interpretations

The comparison of the two interpretations of the three areas should give some idea of the misleading influence the irregularities in the shallow beds may have upon torsion balance pictures.

We may mention in this connection that the influence of deep high velocity shales and the otherwise often irregular consolidation of the underground exercised about as misleading an influence upon seismograph interpretations.

Spacing of Stations

The proper spacing of observations is a most important economical question and should be solved on the base of both geological and geophysical evidence. The importance of this question is made clear, if we realise that in a net of observations at one-third, one-half, two-thirds or 1 mile distance between observation points a number of 9, 4, 2¼ or 1 observations respectively will be required to cover 1 square mile.

Even a very conservative torsion balance man would agree that huge tracts have been covered by a one-third or one-half mile net of stations, where a two-thirds mile net for reconnaissance work might have been fully sufficient.

From the study of torsion balance maps covering huge areas along the Gulf Coast, the writer came to conclusions that for reconnaissance work for salt domes even a 1-mile gradient net would be adequate, especially within the belt of Beaumont Clay and Recent Silt, if the stations are carefully measured and if the necessary discrimination is applied. Huge tracts could be eliminated from further consideration by a 1 mile net and any doubtful area might later be checked up by additional stations.

One-Mile Net

A 1-mile net has been applied to dozens of gradient pictures of known domes and, so far to the writer's knowledge, there is but the Gueydan Dome, which would not have given at least a strong suspicion of a possible dome in a gradient net of 1 mile spacing The Gueydan Dome would, however, also have been missed by a much closer net, because the cap and salt mass of this deep, small dome seem to compensate each other gravimetrically.

Large salt masses as the Manvel-Mykawa-Genoa complex or the Evangeline-Egan-Northwest Crowley complex would have been located without doubt and recognized as such by a 1-mile gradient net, which would have yielded even enough data to roughly localize the individual peaks, though a final interpretation of such areas is difficult even on the base of a very detailed survey, if torsion balances alone are used.

Figure 2 shows the gradient and irogam pictures, based on a 1-mile net, of the Roanoke and Iowa Domes in Jefferson Davis Parish, Louisiana.

These two surveys were made in connection with detailed investigations in the Welsh prospect, the interpretation of which made some general data regarding the two neighboring domes necessary. The 12 gradients on the Iowa Dome and the 20 gradients on the Roanoke Dome, in conjuncture with the isogams, adjusted by least squares, should prove sufficiently that even more than just a general information regarding a prospect may be obtained by a 1-mile gradient net.

Choice of Methods

The long experience with the gravimetric and seismic methods has yielded sufficient information, which allows us to judge properly the comparative efficiency of these two methods under specific topographic and geologic conditions.

A few words might be said regarding torsion balance work in the marshes and on open waters; further about electric, magnetic and radioactivity tests and the measurement of temperature gradients in wells.

Due to topographical conditions the seismic method was long considered the most efficient in the marshes and on open waters along the Gulf. But since the marsh tractor has more or less solved the transportation problem, it appears now that large parts of the marshes might be even more efficiently investigated by torsion balances than by seismographs. Due to the shallowness of the coastal lakes, it is also possible to cover them efficiently by torsion balance stations, if the proper piling is applied.

A relatively considerable amount of money has been spent for various methods of electrical investigations. But with the possible exception of electrical logging of wells, the electrical methods have, however, been of little account in the Gulf Coast, though some faults connected with salt domes actually have been located.

The main reason for the inefficiency of the electric methods in the Gulf Coast, as well as in other places, is the good conductivity of the surface clays. This good surface conductivity means that the contribution to the total electric, as well as to the electromagnetic field is so large right from the very surface layer that any changes in the electric or electromagnetic fields due to deeper layers are shielded.

If the surface is composed of sandy clays or sands, conglomerates and so on, then the surface conductivity is greatly reduced and electric methods may be applied, if the geologic structure is supposed to affect beds, which lie within 600 feet of the surface.

Magnetic Method

The magnetic method has also been given a short test. Since the salt has a slightly negative magnetic permeability, the salt domes in the Gulf Coast were expected to yield similar magnetic lows as did some of the salt domes in northern Germany. The practical results obtained on some Texas domes, however, were unsatisfactory, possibly due to the lower magnetic permeability of the coastal sedimentaries as compared to those in northern Germany, and the method was rejected.

The writer recently has figured out the local magnetic vectors in the space at the Coast tand Geodetic Survey's stations in Texas and adjoining states.

From these vectors there seems to result that, besides regional tendencies, a large amount of detail information might have been obtained from a magnetic investigation along the Coast and that in a general way a magnetic field looks just as irregularily disturbed as in the average Mid-Continent area.

The well-known salt dome axis in Louisiana, along which lie the Jennings, Roanoke, Welsh and Iowa Domes, appears as a magnetic high; a magnetic high seems to correspond also to the Refugio anticline, the Pierce Junction and the Liberty Domes. The writer is inclined to attribute these magnetic highs to the caprock or to the uplifted strata immediately surrounding the axis or domes. A remote possibility exists, however, that the magnetic effect is due to uplifts in the basement below the salt. The too large distance of the vectors does not allow a final conclusion.

Upon further development of the magnetic methods, their comparatively small expense, even if the vertical and horizontal intensities and the declinations are measured, may make them highly competitive also in areas where so far only seismic or gravimetric investigations have been considered.

A method which has been used only spasmodically is the radioactivity method. Though the experience so far would not justify any surface investigations by this method, it seems that the cores of wildcat wells might yield interesting data, if examined for their radioactive qualities, and the chance exists to locate in this way nearby oil accumulations directly, due to the absorbing property of oil for radium emanation and the resulting strong radioactivity of the adjacent beds.

Recent measurements of temperature gradients in wells have shown the temperature to increase more rapidly with depth near and especially above salt domes. The larger temperature gradient has been explained as due to the higher conductivity for heat of the homogeneous salt plug as compared to its interstratified surroundings.

The combined measurements of temperature gradients and radioactivity in wildcat wells might yield valuable information with regard to the presence of salt and oil.

Comparative Costs of Surveys

A. Reconnaissance survey.—The average cost of a torsion balance station in the dry territory of the Gulf Coast is $25. If we apply the distance of 1 mile between stations for a first reconnaissance survey and check into doubtful areas with additional stations, we should need about two stations, which means about $50 per square mile for reconnaissance work.

For extremely favorable conditions this figure may be greatly reduced and for marsh and open water surveys it would be two to three times as high.

Thus a monthly average of 50 square miles could be covered by a small troup, operating three balances, at the expense of $2,500.

A seismograph refraction troup covered, at a monthly expense of about $20,000, an average from 200 to 210 square miles. Domes which did not rise sufficiently above the high velocity shales could not be found by this survey, but domes considerably above that depth should not have been missed. The result is that refraction shooting was about twice as expensive as torsion balancing and further missed the very deep domes.

Just for comparison in cost, we may add an estimate for reconnaissance survey by the reflection method, though this method so far has only been used for detail work.

A reflection party making an average of 100 points per month runs up to a cost of about $7,000. At the present stage of development of this method, we may consider a one-half mile spacing of the points as sufficient for reconnaissance work for salt domes, which makes four points per square mile. Thus about 25 square miles could be covered per month per troup, which means that reconnaissance by reflection shooting would be about six times as expensive as torsion balancing.

All the above figures are valued only for reconnaissance surveys—that is to locate promising looking areas which show up enough to warrant the taking of leases, but which on more detailed investigations might yet prove to be of no account.

The figures refer to surveys made by consulting companies. If the work is done by the oil company itself, the figures should be reduced to about two-thirds to three-fourths of the above quotations.

B. Detail survey.—The figures given for reconnaissance surveys multiplied by three-fifths for torsion balances and by two-thirds for reflection shooting might give an approximate idea of detailing a structure by the respective methods.

If topographically and geologically the torsion balance stands an even chance, there seems to be no doubt that it is the cheapest method for the Gulf Coast area, both for reconnaissance and detail surveys. Considering, however, the low cost of geophysical prospecting as compared to the drilling of a well, it would probably always pay to check the location of a wildcat well by two different geophysical methods.

WIDEN GERMAN DISTRIBUTION

NEW YORK, July 9.—Deutsche-Amerikanische Petroleum-Gesellschaft, wholly-owned German subsidiary of the Standard Oil Co. (New Jersey) is distributing an increasing percentage of German gasoline, benzol and other products in Germany, according to the company's annual report. The company was formerly supplied entirely by the parent company, and still receives the bulk of its products from Standard of New Jersey refineries.

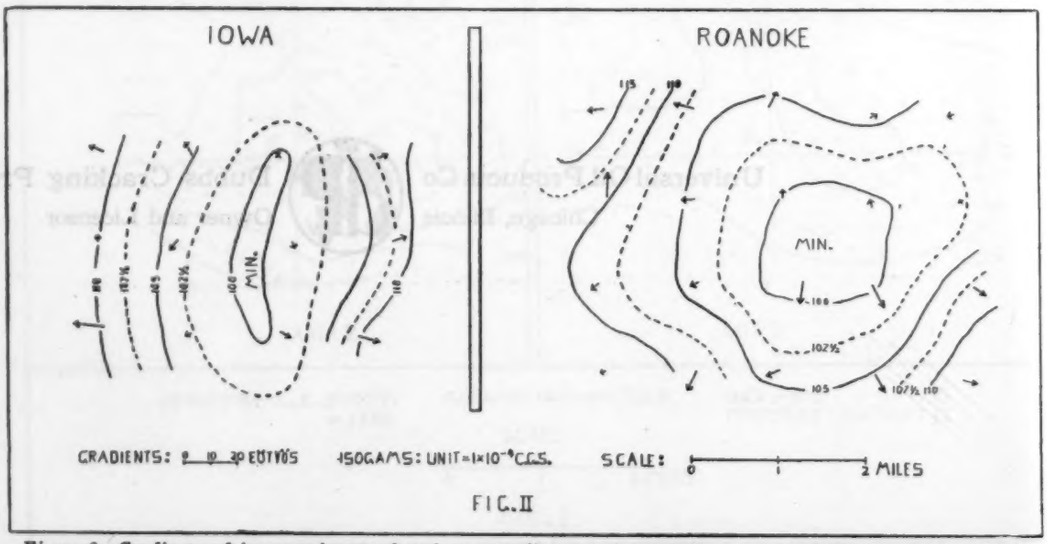
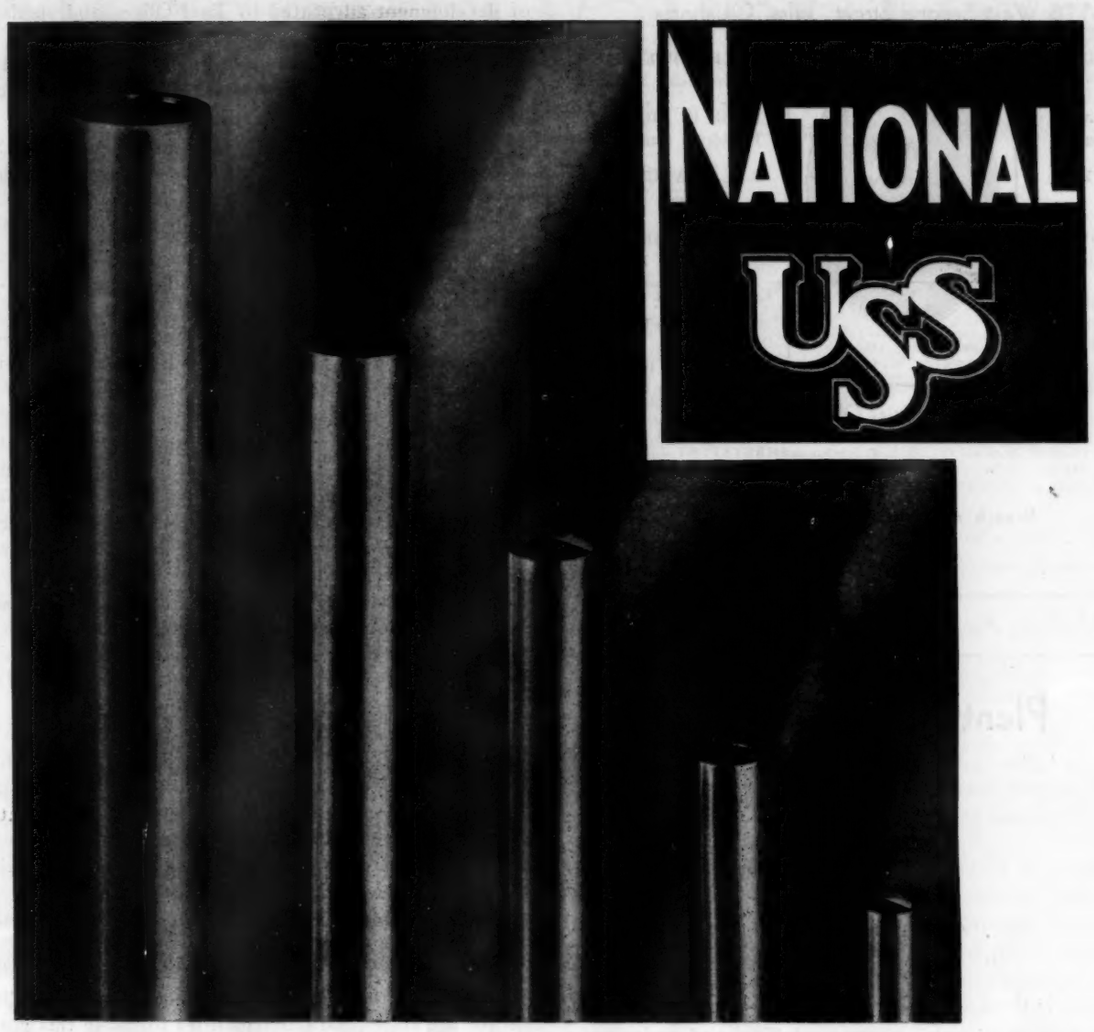


Figure 2—Gradient and isogam pictures, based on a 1-mile net, of two salt domes in Jefferson Davis Parish, Louisiana



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Plenty of Them

President Amos L. Beaty has called a meeting of the board of directors of the American Petroleum Institute at Colorado Springs, Colo., next week to discuss pressing problems that require immediate attention.

There are plenty of them, all pressing and requiring—even demanding— immediate attention.

For example, the reduction of gasoline stocks which on June 1 were 4,057,000 barrels larger than on June 1 a year ago, although consumption has been declining, the United States Bureau of Mines estimating a decline in demand during May of 13 per cent.

Surely here is a problem that is pressing and demanding immediate attention. If it does not get it at once there is grave danger that this surplus in storage may turn into distress gasoline and wreck the market in the height of the consuming season, as has happened in the past.

It is hard to believe that if the directors of the American Petroleum Institute set themselves determinedly to correct this situation that it could not be corrected. It may not be accomplished by resolution but it might be by active individual action.

The production situation also might be given attention. The board could consider the question of withdrawals from storage and the effect upon the producers whose sacrifices have made possible the success of the curtailment program and who have been led to expect a different result than they have been experiencing.

The discussion might include also examination of the familiar theory that higher prices start an orgy of drilling in the light of actual results following the increase of last April.

It will be recognized that it is not the increase in drilling but the increase in new production that is the vital point. There has been an increase in drilling in the past few months but the new production thus found has not endangered the stability of the industry.

The driller may be a potential menace to the industry, since he may find another East Texas or Kettleman, but the chances are so tremendously against him that the alarm over his operations seems wholly out of proportion to the assumed cause.

Candid discussion of the production end of the business could deal with another pressing problem, if the board should so decide. One of the most important problems before the whole industry is now before one of the subcommittees of the Committee on Production Practices of which Charles F. Roeser is chairman.

This is the committee appointed to consider "the new conception" of development advocated by Earl Oliver and sponsored in The Oil and Gas Journal.

The meeting at Colorado Springs offers a splendid opportunity for executive, legal, engineering and production representatives to get together for a thorough discussion of this subject.

Some such clearing house is essential because of the varied angles to be taken into account. The engineering viewpoint, for example may be limited by the legal boundaries. Every phase must be looked into so that whatever is recommended must be practical and legal.

Of the general agreement on the desirability and even the necessity for getting away from the "wild game" theory of development and the regularization of oil production on a business basis that will give the industry control over its own operations there is no doubt.

The American Petroleum Institute cannot afford to let "legalized piracy" continue by default.

One of the subjects most likely to be generally talked of at Colorado Springs as elsewhere is the menace of increasing taxation and Vice President Boyd's suggestion of a permanent committee to be on guard on behalf of the petroleum and associated industries.

Fayette B. Dow recently called attention to the fact that the average net income of the oil industry after taxes during the so-called boom years, averaged approximately 2.7 per cent on the investment while the annual taxes on oil are now almost three and one-half times the average net income during that period.

There is a bitter truth in his observation that the oil industry is now a tax-collecting industry which gives point to Dr. Paulus' gibe about its chief product being "taxoline."

Nor have we reached anywhere near the limit in this matter as witness a plea for a larger portion of the state gasoline tax revenue for municipalities to meet their local needs just voiced by the executive secretary of the American Municipal Association.

His complaint is that last year municipalities received less than $20,000,000 from a total of more than $500,000,000 paid by motorists as a tax on their fuel. "Nearly all of the remainder went to states which derived approximately 20 per cent of their total revenue from this source."

With the federal tax collector's arm now reaching out to tax motor oil and other petroleum products besides gasoline the temptation for the states and municipalities to shake this plum tree may be irresistible.

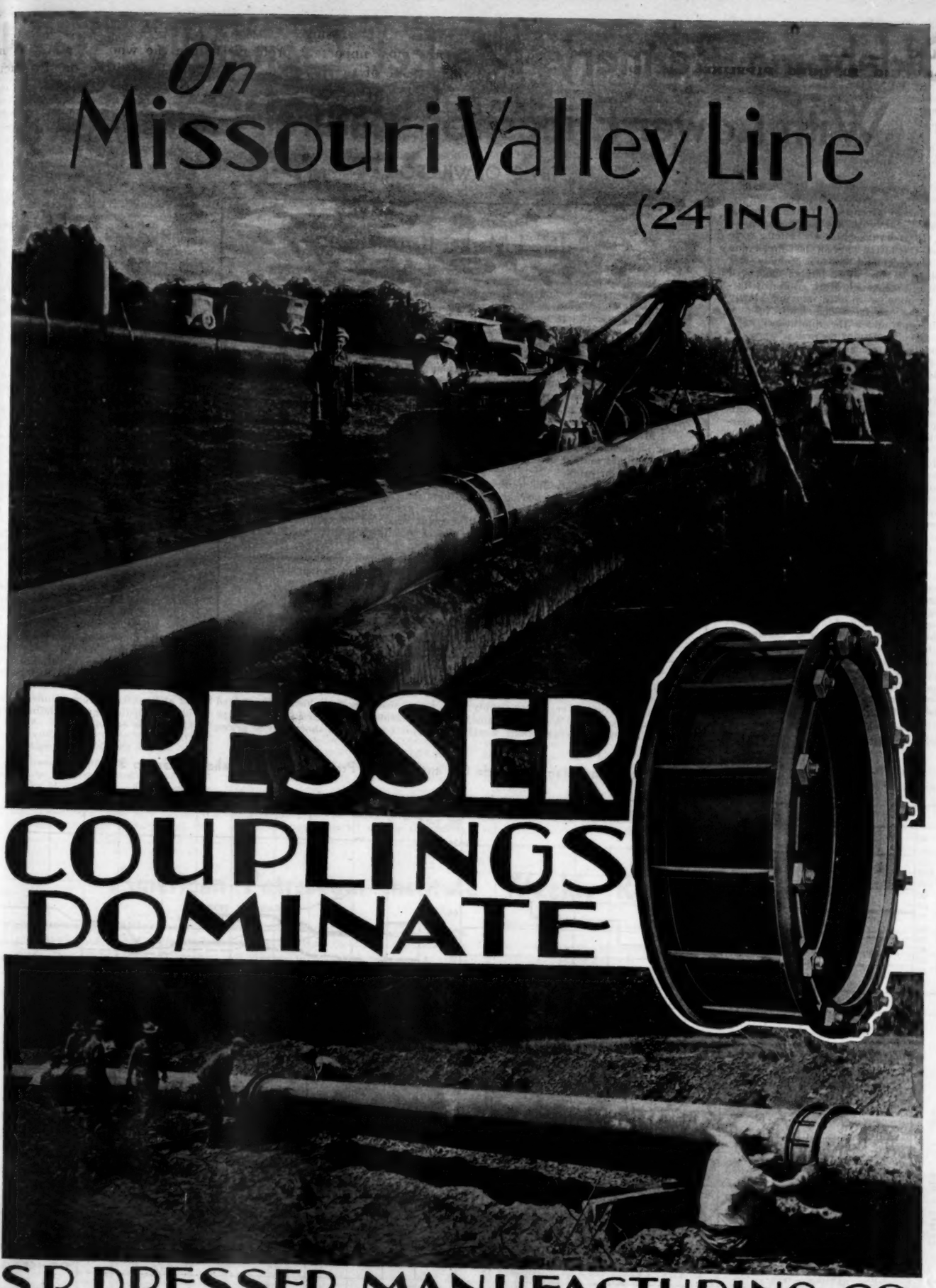
While on the subject of gasoline the board of directors might profitably confer on the attractive possibilities of co-operative advertising to induce the motoring public to use more gasoline in week-end and evening trips.

When this suggestion was first proposed in The Oil and Gas Journal five years ago only a few companies were making a bid for tourist trade through outing advertising. The possibilities of stimulating nearer-home travel evenings and week-ends by concerted display of inviting trips with ready information about routes, accommodations and sightseeing, seemed worthy of equal consideration but the fear that an outsider might reap some of the additional gallonage threw cold water on the idea.

Consumption then was steadily increasing. Today it is slipping, and slipping fast. Perhaps the board of directors, meeting together, may see the possibilities and overlook the individual doubt that a few drops of the extra gallonage thus obtained might fall to some "gyp" station.

The increase in consumption would be large enough to make that loss trivial. If co-operative advertising has paid the sugar, copper, lumber, soap, florist and other industries why would not it pay the oil business?

Anyway, the directors ought to find enough pressing problems requiring immediate attention to occupy all their time at Colorado Springs and even after they return home.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Oklahoma Refinery Market Generally Steady With Lower Prices for Natural Gasolines

By C. O. WILLSON

Oklahoma (Group 3) refinery prices continued fairly steady over the past week. Refinery gasoline quotations were weaker the latter part of last week due to a slow demand but on Monday and Tuesday of this week buying improved and prices recovered. Most grades of natural gasoline were still moving slowly and prices are from one-eighth to one-fourth cent under the quotations of a week ago.

Among the remaining products kerosene for the first time in several weeks did not record a price decline. Although there are still a few cheap sources of supply for this product in the Mid-Continent most operators do not have specification material to offer on the spot market, the Kansas market being particularly strong. Buyers of furnace oil material still finds relatively little material offered by Oklahoma refiners and prices on some grades are fractionally higher than they were a week ago. Most of the inquiries for furnace oil material is for delivery starting late in August and a large majority of refiners either have quit the manufacture of the product or are now storing their production to take care of the demands of their own marketing departments.

Three of the manufacturers of lubricating oils in Oklahoma reported an improvement in the demand for stocks and finished motor oils. Some of the buyers who bought heavily in early June to escape payment of Federal tax are in the market again and with the seasonal increase in demand refiners are hoping for continued improvement over the balance of the month.

Fuel Oil Situation

Buyers of all grades of fuels who are particularly interested in purchases for the coming fall and winter are finding an unusual situation in regard to supply. As previously explained in these columns, refiners are more reluctant than usual to take on contracts for furnace oils covering the season which starts September 1. Some observers who have investigated this situation are predicting a shortage in supplies which will shortly force prices to levels substantially above present quotations.

This development is due to the constantly increasing emphasis placed on cracking in refinery operations coupled with reduced crude oil runs to stills. Many Mid-Continent refiners have balanced their crude skimming and cracking operations to the point where they do not produce a product suitable for furnace oil. The only products of their light oil operations are gasoline and heavy residuum fuel oil with kerosene or tractor fuel cuts as needed to supply their regular trade. In brief, the distillate cuts ordinarily obtained from both skimming and cracking operations are more valuable as cracking stock than they are as fuels. Expressed another way, the prices received for fuel fractions have been out of line with the posted schedule for crude oil and the average refiner for that reason has been forced to reduce his crude oil purchases to a minimum and at the same time expand his cracking operations. The necessity of securing higher antiknock gasolines obtainable from cracking operations is another development which also has tended to place emphasis on the cracking rather than the crude oil skimming operations. Obviously, this trend must continue until either the posted crude oil schedules are reduced or prices on fuels have advanced to the point where refiners will find it expedient to dispose of them at their plants rather than use them as raw material in their cracking operations. This balance between posted crude oil and fuel prices will vary with the manufacturing facilities and marketing conditions of the individual companies and no definite relationship can be established.

Refined Market Barometer

Refinery tank car markets on gasolines were disturbed during the past week by scattered reductions in tank wagon and service station schedules. Up to Tuesday, however, there were no important reductions in the tank car quotations and it was hoped that improved demand over the balance of the month would prevent any general declines. Natural gasolines quotations were lower in the Mid-Continent and higher in California. Kerosene movement continued slow with prices firmer than they were a week ago. Heavy fuels and gas oils were strong at most refining centers, particularly along the Gulf Coast and East Coast. Cylinder stocks were firm in the eastern areas. Better demand for high melting point wax. Although export business is still slow, reports in trade point to improved demand at higher price levels.

Mid-Continent—Refinery gasoline prices hold fairly firm although new spot business continues slow. Natural gasoline quotations lower. Kerosene and distillate market stronger. Fuels and gas oils unchanged. Improved demand for lubricants.

East Coast—Gasoline tank car prices advanced at several points although tank wagon and service station quotations reflect price wars. Bunker fuels steady. Slow demand for gas oil. Some grades of cylinder stocks advanced. Better demand for high melting point wax and prices higher.

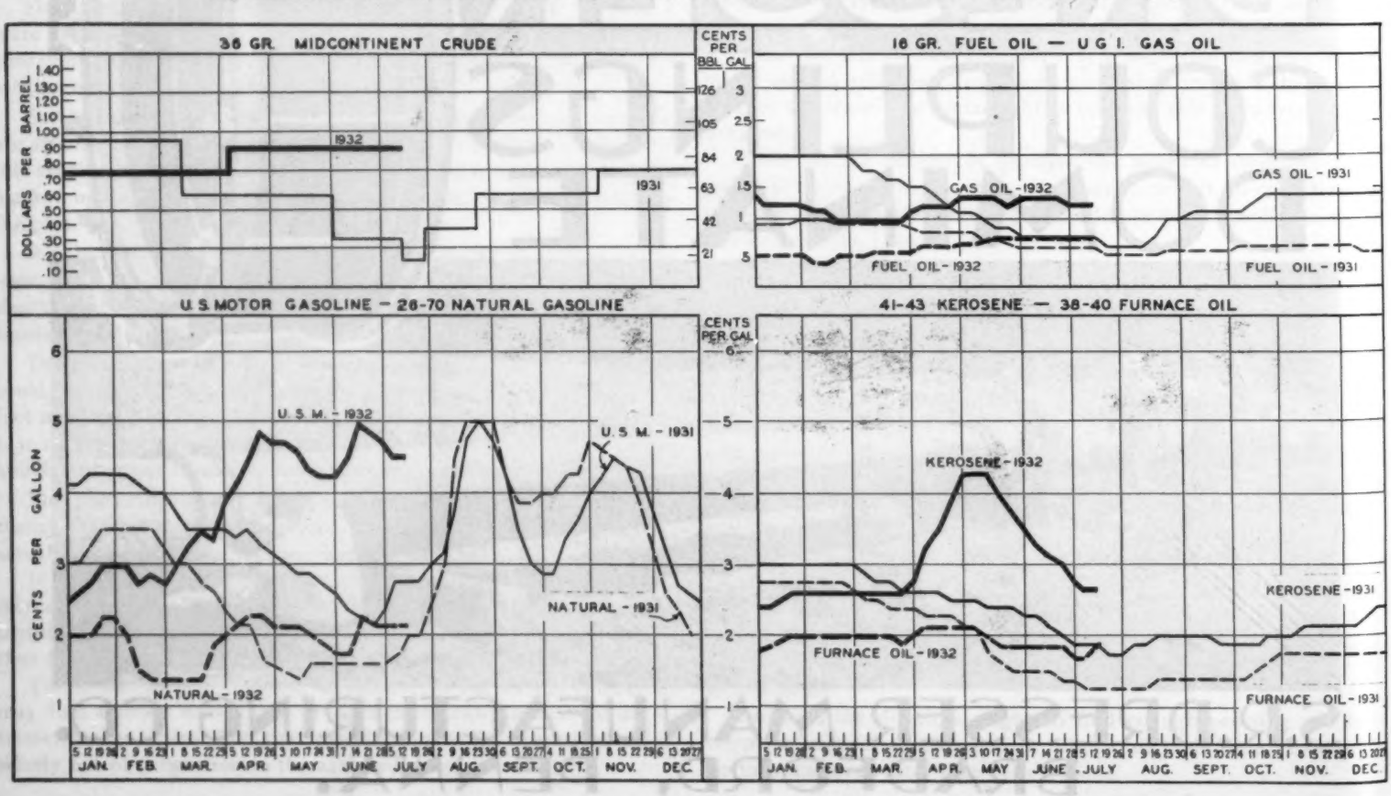
Pennsylvania—Prices on some grades of gasoline slightly lower. Kerosene slow. Cylinder stocks firm.

Gulf Coast—Kerosene slow and prices lower. Gasoline demand largely confined to coastwise movement. Fuel oil strongest product in market.

Chicago—Gasoline prices show little change with improvement in demand expected. Weak service station market on gasolines. Some grades of special naphthas lower in price. Fuels and gas oils steady.

California—Refinery gasoline and natural gasoline prices advance.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Some refiners with modern cracking equipment have reached the point in their manufacturing operations where furnace oil prices and other fuel prices will have to be at least twice their present levels before they would consider changing their operations so as to be in a position to offer these products to customers. Most of these refiners are definitely committed to certain octane ratings in their gasoline output and they would continue to operate their cracking stills at capacity even if it involved a penalty in the net revenue from plant operations.

The foregoing are some of the angles to the marketing problem now being considered by market students who attempt to gauge market probable developments more than 30 days in advance. These students over the past two years have pointed out that the relatively low prices prevailing for overhead and residuum fuel fractions of the refinery operation was in effect a direct attack on the soundness of the crude oil price schedules not only in the Mid-Continent but in practically all the domestic fields. While the absorption of these fuel fractions by the cracking operations tends to reduce the quantity of crude oil required, it is a necessary development before the present crude oil market structure can be said to be on a sound basis.

Local Market for Fuels

In regard to the heavy residuum fuel oils, the market in practically all of the refining centers of the Southwest and Middle West is largely governed by local conditions. Operators, wherever possible, have reduced their output to the point where their sales are confined to short hauls and they are in a position to absorb a part of the saving in freight rate. Oklahoma and other Mid-Continent refiners have been practically forced out of the territory north of St. Louis due to the low prices quoted by refiners with plants located in the St. Louis, Chicago, Toledo, Kentucky and Detroit areas. For instance, Chicago refiners are quoting prices for delivery near that city at prices which are less than the freight rates from Oklahoma to the consuming points. This situation is in contrast to that of a few years ago when Oklahoma fuel oil was sold as far north as northern Michigan and Minnesota involving freight rates as high as $1.50 per barrel.

The spread of natural gas lines to some of the largest industrial users of fuels in the Middle West and the competition of cheap coal are factors in this situation. Observers who are familiar with this condition are certain that the Mid-Continent is definitely out of the fuel markets of the northern states and they must continue to center their efforts on local outlets where they can meet the competition of coal and gas. The Mid-Continent fuel market has also suffered from the decreased operations of railroads in the Southwest. The carriers are the largest single buyers of fuel in that area but their purchases over the past year have been much less than during 1929.

Oklahoma refiners have been more fortunate than some of their neighbors in regard to heavy fuels. While the State has both natural gas and cheap coal, refiners have been able to make shipments to small industrial buyers and public utilities at prices which give a net back which is approximately double the prices in effect a year ago. Kansas refiners have suffered recently from the low prices quoted by Kansas City and St. Louis refiners. Formerly these two areas absorbed practically all the fuel oil output of Kansas refineries at prices which were usually from 10 to 25 cents per barrel higher than the Oklahoma market. The North Texas and Panhandle fuel market has fluctuated with changes in local conditions. Part of the time, local industries and railroads have absorbed practically all of the fuel oil available but at other times there have been surpluses which have to be moved long distances at high freight rates so that the net back at refineries leaves the operators little return for that part of their plant output. In North Louisiana two or three refiners have had difficulty in disposing of their fuel oil output except at prices which are out of line with the price paid for East Texas crude oil.

Gasoline and Naphtha

The Oklahoma market on low octane U. S. Motor gasoline has fluctuated over a price range of one-eighth to one-fourth cent depending largely on the sales policies of two or three refiners selling products through brokers and resale agents. These refiners are moving all their output currently and change their quotations almost from day to day in order to secure immediate sales. Resale material of low octane was sold as low as 4⅛ cents last week but the first of this week 4¼ cents appeared to be the low of the resale market with 4½ cents the low of the market in sales direct to the trade. Sales were being made up to 5 cents per gallon with three-eighths cent premium for the 57-65 octane material and five-eighths cent premium for the grade having a minimum octane of 65.

Spot sellers of refinery gasolines complain of the competition of low vapor pressure natural gasolines. These low vapor pressure grades are being made available to jobbers as low as 2⅞ cents for 15-pound material with price ranges up to 4¼ cents for 9 pounds. The 11-pound material quoted to the trade at 3⅝ to 3¾ cents over the week with lower quotations from resellers were particularly objectionable to refiners endeavoring to secure a low of 4½ cents for the low octane U. S. Motor gasoline. The sellers of these low vapor pressure natural gasolines usually guarantee a minimum octane rating of 60 and in many cases 65 or 70. This places the gasolines in competition with the regular or premium grades of refinery gasolines. So far there have been no general complaints regarding vapor lock in these low vapor pressure gasolines although many had predicted they would lose favor with consumers during the summer months due to excessive volatility. There appears to be no immediate remedy for this unsatisfactory competition between the natural gasoline and refining industries. It is felt that, in time, regular outlets can be found for the low vapor pressure grades of natural gasoline at prices in line with their value as motor fuel which in many cases would mean a premium relationship to refinery grades.

Natural Gasolines

The 26-70 grades were selling in Oklahoma the first of the week at a price range of 1⅞ to 2 cents and 1¾ to 1⅞ cents in North Texas. The demand was

(Continued on Page 31)

U.S. Bureau of Internal Revenue Explains Penalty Features of Revenue Act

By C. E. KERN

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 8.—In response to numerous inquiries as to whether there is any provision of law to prevent holders of merchandise on which no tax has been paid from increasing prices to one purchaser on the ground that the tax renders necessary such advances, the Bureau of Internal Revenue has issued the following statement:

"Dealers in articles of the classes taxable under the Revenue Act of 1932 are, of course, free to fix the prices at which they sell those articles. However, Section 1,123 of the Revenue Act of 1926, which under Section 627 of the Revenue Act of 1932 is applicable to the taxes imposed by Title 4 of that act, provides as follows:

" 'Whoever in connection with the sale or lease, or offer for sale or lease, of any article, or for the purpose of making such sale or lease, makes any statement, written or oral, (1) intended or calculated to lead any person to believe that any part of the price at which such article is sold or leased, or offered for sale or lease, consists of a tax imposed under the authority of the United States, or (2) ascribing a particular part of such price to a tax imposed under the authority of the United States, knowing that such statement is false or that the tax is not so great as the portion of such price ascribed to such tax, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not more than $1,000 or by imprisonment not exceeding one year, or both.'

"Under Section 1,123 it is a criminal offense for a dealer who increases the price of merchandise in his hands on June 21, 1932, in order to take advantage of the competitive situation arising out of the imposition of the taxes under the Revenue Act of 1932, to represent falsely in any way that the increase is due to a tax paid on the merchandise."

In restating regulations covering excise taxes on lubricating oil and gasoline, the Bureau of Internal Revenue has announced the following penalties and conditions and persons involved:

"Any person liable to tax on the articles named in Regulations 44 who wilfully fails to keep proper and accurate records is subject to a fine of $10,000, or imprisonment, or both, with costs of prosecutions, and is also liable to a penalty equal to the amount of the tax not paid. These penalties apply to an officer or employe who, as such officer or employe, is under a duty to perform the act in respect of which the violation occurs, as well as to a person who fails or refuses to keep the records."

American Petroleum Institute Weekly Refinery Statistics

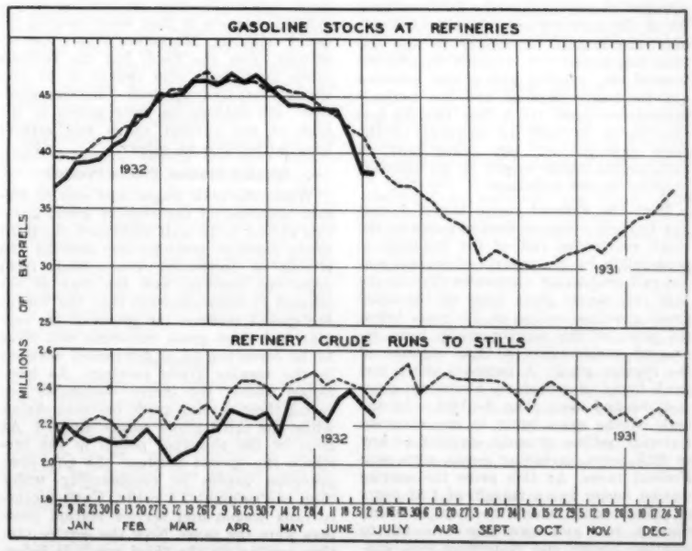
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks All figures in 42-gallon barrels.

Week Ending July 9, 1932, Compared to Week Ago

	Week ending July 9				Week ending July 2			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	444,000	6,367,000	7,311,000	100.0	494,900	6,063,000	7,283,000
Appalachian	91.8	76,300	1,487,000	1,112,000	91.8	89,400	1,509,000	1,128,000
Ind., Ill., Ky.	98.9	295,600	5,482,000	4,268,000	98.9	299,400	5,432,000	4,240,000
Okla., Kans., Mo.	89.6	225,900	3,284,000	3,372,000	89.6	201,900	3,246,000	3,439,000
Tex. Gulf	99.8	423,100	5,078,000	7,469,000	99.8	429,300	4,874,000	7,469,000
La. Gulf	100.0	107,600	1,471,000	4,536,000	100.0	88,400	1,389,000	4,425,000
Inland Texas	76.5	107,700	1,286,000	2,519,000	91.3	92,000	1,335,000	2,746,000
N. La. and Ark.	97.0	44,100	130,000	746,000	89.3	48,300	220,000	749,000
Rocky Mtn.	89.4	37,700	1,820,000	656,000	89.4	32,100	1,793,000	657,000
California	96.7	456,700	12,693,000	99,104,000	96.7	490,000	13,062,000	98,698,000
Total U. S.	95.1	2,218,700	39,098,000	131,093,000	95.1	2,265,700	38,823,000	130,834,000

Week Ending July 9, 1932, Compared to Year Ago

	Week ending July 9				Week ending July 4, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	444,000	6,367,000	7,311,000	100.0	459,300	7,134,000	9,587,000
Appalachian	91.8	76,300	1,487,000	1,112,000	91.8	86,400	1,479,000	1,202,000
Ind., Ill., Ky.	98.9	295,600	5,482,000	4,268,000	96.6	307,600	6,094,000	3,804,000
Okla., Kans., Mo.	89.6	225,900	3,284,000	3,372,000	89.6	273,900	2,876,000	4,834,000
Texas	76.5	107,700	1,286,000	2,519,000	91.3	523,100	7,262,000	10,405,000
La. and Ark.	97.0	44,100	130,000	746,000	98.9	165,900	1,360,000	2,745,000
Rocky Mtn.	89.4	37,700	1,820,000	656,000	89.3	42,400	1,766,000	853,000
California	96.7	456,700	12,693,000	99,104,000	96.5	466,100	11,727,000	97,837,000
Total U. S.	95.1	2,218,700	39,098,000	131,093,000	94.7	2,324,700	39,698,000	131,367,000
Tex. Gulf	99.8	423,100	5,078,000	7,469,000	99.8	418,700	6,118,000	7,401,000
La. Gulf	100.0	107,600	1,471,000	4,536,000	100.0	114,100	1,266,000	1,329,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

Refinery Gasoline Market Unsettled in Chicago, With Slow Demand for Spot Movement

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, July 11.—The anomaly of a better undertone in the Chicago district gasoline tank car markets and more numerous price concessions from refiners suffers no lack of explanations in oil trade circles here. A semimajor refiner contends that a comparatively insignificant quantity of gasoline is being offered by distributors and brokers, with the distributors refusing to take title to the material until it is definitely placed. In other words, price is hardly an object, except to the refiner, and the refiners in this situation wants the gasoline moved and no questions asked. The distributors, on their part, are more or less willing to admit a bearish attitude. Money is scarce, they say, and the less capital they have tied up, the stronger is their position. The jobbers are freer from worries than they have been in years, and the major problem they are revolving in their minds is whether or not to risk the substitution of a blended motor fuel for U. S. Motor and higher test gasolines.

Hope Based on Crude Strength

The real factor which is promoting a better outlook in the face of lower refinery quotations and natural gasoline blend competition is the more confident attitude toward the crude oil situation. Opinions from Mid-Continent, Kentucky, Michigan and Pennsylvania sources are unanimous on the point that crude oil is setting a firm foundation for refined products market structures. Reports of further curtailment in crude runs to stills, encouraging in themselves, are apparently having no adverse effects on the crude markets.

At the heavy cost of mounting taxation, the oil industry is making large gains in public good will and its progress is receiving the aid of an increasing number of newspapers which have been brought to realize that the fabulous profits of the industry are nonexistent. Probably the largest newspaper in the district has completely reversed its attitude toward the industry and is now pointing out its heavy burdens and the nation's dependence upon it. A few months ago this paper favored an increase in the state gasoline tax, but added that an unfavorable result might be an increase in price to the consumer.

That the Federal excise tax of 1 cent has brought about serious changes in the retail marketing end of the industry is made plain by the reports of several major and semimajor companies that in the past few weeks their sales of the third grade gasoline, selling at 2.5 cents below the price of the regular grade, have increased considerably at the expense of the regular grade. A personal check last week found that business at the cut price stations had more than doubled with the bulk of the sales being in the cheapest material, selling at some stations as low as 12.5 cents, including 4-cent state and Federal taxes. At this price the service station owner has a margin of 1.81 cents a gallon with which to pay handling charges, rent and operating costs, not to mention license and inspection fees, special and ordinary taxes.

Jail sentences and fines were imposed last week on six gasoline tax evaders following their guilty pleas.

Gasoline Buying Lull Continues

The lull in gasoline tank car buying activity has been extended beyond expectation, partly because of unfavorable weather, and partly because estimates of distributors and jobbers stocks were too low. While not many buyers are in the position of two distributors who have enough stocks to keep them out of the markets until late in August and September, there are more buyers with considerable material on hand than was thought a week ago. Another factor working against the gasoline markets is the increasing use of natural gasoline blends at the independent stations. One distributor who sold practically no natural gasoline in Chicago district before this year, is now moving three to four times as many cars of natural gasoline than U. S. Motor. This is the 15-pound material which is rated at 65-70 octane number. This marketer also sells on an average of five cars a week of the 26-70 material. It is evident, from tests made on the blended gasolines at the service stations, that a more stabilized material than even the 15-pound material must be used if the independent stations intend to keep their customers during the summer months, as most of the samples taken showed that vapor lock would be inevitable on moderately warm days. Refiners who have lost U. S. Motor business to promoters of the natural gasoline blend say they are confident this business will return.

Large Buys Bring Low Prices

Marketers who are bearish in their attitude point to the low bid which recently got the business of a large buyer in Chicago district. The purchase was for more than 100 cars for delivery over this month. Although the buyer makes it a practice to keep the successful bid a deep secret, the rumor was immediately abroad that the price was 3.3 cents Group 3. It was learned later that the successful bid was 4.25 cents, including the 1-cent Federal tax, or 3.25 cents, Group 3. However, these large movement prices, witness the post office business, apparently have no relation to the general markets as they have escaped the usual criticism. Marketers report low offerings from the field, but the refiners other than those who appear to be continually stocked up with "distress gasoline" are holding up their prices to the high of the current range and several have withdrawn as sellers.

Service Station Prices Weaker

While the tank wagon and service station postings on the regular grade gasoline appear to be well stabilized, the third grade gasoline postings are showing the effects of increasing competition from price cut sources, and the fear is expressed in some quarters that the widening spread between the prices of the regular and third grade materials will have to be corrected by a downward revision in the regular grade postings. As mentioned above, the larger companies are seeing their regular grade business shrink while the third grade moves upward. At most of the principal points in the territory the spread between the two nonpremium grades is considerably wider than the original 1.5 cents. Until recently tank wagon and service station postings were the same. Now the service station posting on the third grade is below the tank wagon price. To point out a few instances: Green Bay, tank wagon, 17.3 cents, service station, 14.6 cents; Davenport, tank wagon, 16.2 cents, service station, 13 cents; Quincy, service station price 4.9 cents below the regular grade; Keokuk, tank wagon, 16.2 cents, service station, 15.1 cents; Des Moines, tank wagon, service station, 4.7 cents below regular grade; Minneapolis, tank wagon, 14.1 cents, service station, 13 cents, and the regular grade price is 18.4 cents; Mankato, tank wagon, 15.1 cents, service station, 14.6 cents; at Milwaukee the price is 4.7 cents below the regular grade; at St. Joseph the price is 4.6 cents below the regular grade.

After a recess of several months it appears that the practice of giving away premiums at the service station is to be revived under the banner of several major companies. A representative of one of the larger companies said: "It looks like we are going to have premiums at all of our franchise stations just at the time the trackage stations are giving up the practice as a money loser." The premiums range from golf balls to an extra gallon of gasoline or an extra quart of lubricating oil. Nearly all of the refiners are holding specialty sales at their service stations, and not a few are offering specials on greasing jobs. One major company furnishes a contract to the customer which includes the following stipulations: "The (company) agrees to fully grease (crank case oil change, transmission and differential greasing included) all motor trucks and passenger cars of the 'customer' at a flat discount of 25 per cent off total amount of list price for work done, payable in cash upon completion of each greasing job." The customer on his part agrees to have at least four greasing jobs done a year at the station where he got his contract.

The State of Illinois sold another million dollars' worth of automobile license plates last month, bringing up the total for the first half of the year to $16,059,844. The semiannual report shows that the state sold 1,362,550 pairs of license plates in the first six months of the year. Revenue collected by the various departments of the Secretary of State's office totaled $17,536,415, including the $16,059,844 from automobilists.

Gasoline Tank Car Markets

Quotations Monday showed the price ranges somewhat narrower and the gasoline tank car markets slightly weaker. The markets were inactive and jobbers were staying out regardless of price. However, it is reported in Chicago district oil trade circles that the majority of distributors and jobbers have reduced their stocks.

Although resellers reported that they could pick up U. S. Motor gasoline in the field as low as 3⅞ and 4 cents, Group 3, the lowest price for resale apparent with real gasoline to back it up was 4½ cents. The lower prices are discounted by the fact that one distributor who knows all of the ropes set out to get up to 20 cars and found, as he said, that "there are a lot more prices than gasoline." While it is felt that undue importance is being given to the offerings of "distress refiners," there is more talk this week of the possibility that the larger refiners will step in and take this gasoline off the markets. One semimajor refiner said that his company would join others in cleaning up the markets, but he expressed the doubt that enough companies were similarly inclined in view of past experiences with these refiners. One large company who has done a lot of refinery buying in the past stated flatly that they were "through with trying to help irresponsible refiners."

Gasoline Tank Car Prices

The ruling gasoline tank car markets to the trade Monday were as follows: U. S. Motor, 4⅜ to 4½ cents, 60-62 400 endpoint gasoline, 4½ to 4⅝ cents; 64-66 375 endpoint gasoline, 4⅝ to 4⅞ cents; aviation, fighting grade (not 87 octane number), 5⅜ to 5⅝ cents; 68-70 360 endpoint gasoline, 4¾ to 5 cents. Prices in the aviation materials, including the 87 octane number fighting grade used by the Government, are nominal as far as the spot markets are concerned. The Government has awarded contracts on its 6,000,000 gallons requirement of fighting grade and domestic, but experts working on the voluminous report said they were still attempting to figure out representative Group 3 prices on the various lots awarded. One thing appeared certain, these experts said, and that is that refiners will sell aviation gasoline at any price they can get for it.

Chicago district distributors report the following quotations received on natural gasolines: 26-70, 1⅞ cents; 22-pound, 2⅛ cents; 20-pound, 2¼ cents; 18-pound, 2½ cents; 15-pound, 2⅞ cents; 12-pound, 3⅝ cents; 11-pound, 3¾ cents. Their cost prices on blending naphthas are: 50-52, 58-60 octane, 4¼ cents; 50-52, 64-65 octane, 4¾ cents; 50-52, 73-75 octane, 5¾ cents. A blend of the 15-pound material and the 58-60 octane naphtha to provide a middle octane gasoline costs 3.817 cents a gallon. If the refiners want to lessen the threat from this quarter it's up to the refiners to help place natural gasolines in their former relationship to gasoline. However, one of the larger refiners in Chicago district is offering large quantities of reported 26-70 material from their recovery units on the open markets.

Naphtha Tank Car Markets

Some of the weakness in the gasoline tank car markets has communicated itself to the naphtha tank car markets and Monday lower prices were being quoted on several products. The cuts in each case were a quarter of a cent. Cleaners naphtha moved down to 6¼ to 6½ cents; rubber solvent (light and heavy) were cut to 6-6¼ cents; Petroleum thinner was reduced to 5 to 5¼ cents. Business continued without special activity in any of the products. Blending naphthas were in better demand and were better in price than U. S. Motor gasoline.

Kerosene Tank Car Markets

The kerosene tank car markets continued dull and weaker in price with the 41-43 material quoted at 2⅝ to 2¾ cents, and the 42-44 kerosene offered freely at 2¾ to 3 cents.

Distillates and Fuel Oils

Distillates and fuel oils from district refineries and for movement from the group were in good tone and refiners were reported holding their materials for the buying season. However, some fuel oils from Michigan were quoted under the market 5 to 10 cents, and southern Illinois plants were moving material into Indiana at prices which had little relation to the Group 3 postings. The 24-26 Michigan fuel oil is quoted at 27½ to 30 cents a barrel, as much as 17 cents under the high of the ruling markets, and the Illinois below 18 (15° gravity) fuel oil is offered at 15 cents, Group 3, or 12½ cents under the high of the ruling markets.

East Coast Markets Are Strongly Maintained Undertone Remaining Fairly Steady

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, July 11.—Refinery markets quieted down somewhat after the sharp spurt in gasoline sales over the previous week-end, but despite the easing off in demand, markets were strongly maintained by the principal refining interests in this area. Aside from fractional price advances by smaller interests to bring their quotations into line with the general market, eastern tank car gasoline markets went through the week unchanged. The present price basis for gasoline at East Coast refineries shows an unusually wide differential over Gulf and California motor fuel quotations, and the easier tendency in evidence in Mid-Continent markets during the week just ended has aroused a little uneasiness in local market circles. The increased movement of California gasoline eastward is likewise expected to have its effect on East Coast markets, and there is an apparent feeling in some quarters of the market that refinery prices in this area were advanced too sharply during the recent upward swing. However, the present undertone remains fairly steady and weather conditions over the next few weeks are expected to determine the immediate future of the price basis.

Lubricating oil buying showed some improvement in this area during the week, and quotations on cylinder oils were again marked higher on a number of grades, reflecting higher price schedules named by Pennsylvania refiners during the preceding week. The retail market for automobile lubs is still the scene of considerable price cutting, with fly-by-night sellers retailing "100 per cent Pennsylvania oil" as low as 10 cents a quart. This competition is giving marketers considerable concern, and thus far no way has appeared to overcome it, even though it is reported that some of this cut-price oil is "reclaimed" cylinder oil.

Refinery Gasoline

Smaller refiners have advanced their quotations on both regular U. S. Motor gasoline and high test motor fuel in line with posted prices of major interests, and the East Coast market presents a firmer picture this week. The present range of posted prices at principal East Coast ports is as follows:

New York—U. S. Motor, 8 to 8¼ cents; 65 octane and above, 8½ to 8¾ cents.

Boston—U. S. Motor, 8¼ cents; 65 octane and above, 8½ to 8¾ cents.

Baltimore—U. S. Motor, 8¼ cents; 65 octane and above, 8½ to 8¾ cents.

Charleston—U. S. Motor, 7¾ to 8¼ cents; high test, 8½ to 8¾ cents.

Tank car movement fell off somewhat during the week after the heavy gallonage slipped during the previous week, but movement was well sustained nevertheless and no price cutting of major importance was reported. Stocks of motor fuel on the East Coast fell off slightly during the week ending July 2, totaling 19,214,000 bbls. on that date, a decline of 44,000 bbls. for the period.

Reports from the Pacific Coast indicate that California gasoline will move to Baltimore and New England points, notably Boston, Providence and Fall River, in larger volume during the next few months, and the expected influx of the Pacific Coast product may make for sharper selling competition at these points.

In fact, the present tank car price basis at all East Coast points is considerably over the levels at which cargo lots of gasoline from California and the Gulf might be laid down, and this situation is a potential threat to the stability of the posted tank car market. Current market conditions, however, are vastly different from those of a few years ago, when there were many interests willing and able to "take a flier" in cargoes of gasoline at East Coast ports, and this condition, together with the fact that terminal facilities at the principal ports are under the control of leading interests, determined to keep the East Coast markets stabilized, is expected to minimize the movement of "free" gasoline to this area during the summer months.

Tank Wagon Gasoline

With the exception of several local price changes in New England, inaugurated by Standard Oil Co. of New York on July 9, and followed by other major marketers, eastern tank wagon and service station markets were steady throughout the week, with no general revisions reported. The New England revisions included cuts averaging 2 cents per gallon in tank wagon and service station prices in Boston and eastern and southern Massachusetts, with a cut of 1 cent per gallon at Providence, R. I. The new prices involve a downward readjustment in tank car quotations by Socony and Shell Eastern, which quote for the New England market a delivered price based on posted service station prices.

A number of marketers reported record gallonage over the Fourth of July week-end, and demand was well maintained during week just ended. Steel barrel gasoline deliveries in metropolitan New York have now given way entirely to tank wagon distribution in this market.

Eastern marketers were greatly interested in a Department of Commerce summary issued this week showing that the revenue motor bus has become an increasingly important factor in motor fuel consumption, accounting for almost 3 per cent of the 1931 domestic gasoline consumption, as compared with but 1.5 per cent of the 1925 demand. The increased gasoline demand, the report stated, results largely from the increased motor fuel consumption per bus rather than from a gain in the number of buses operated. Average gasoline consumption by intercity buses has increased from 6,061 gallons in 1924 to 11,585 gallons in 1931, while that of city buses has increased from 6,616 gallons in 1924 to 9,176 gallons in 1931. While the annual mileage traveled by the average bus has increased, the enlarged gasoline demand has been due primarily to the decreased mileage obtained per gallon, due to the use of larger buses. Further increases are indicated.

Fuel Oil

Bunker "C" oil continues in steady position in Atlantic seaboard markets, and leading refiners continue to quote 85 cents per barrel, in bulk, at refinery terminals. Demand is well maintained, but refiners are seriously concerned over the possibility of a general adoption of colloidal fuel, made up of 40 per cent pulverized coal and 60 per cent fuel oil, by steamship interests, following the successful test runs recently by a Cunard liner utilizing this fuel. Colloidal fuel as an immediate competitor of bunker "C," however, appears unlikely at this time.

Import movement of fuel oil has not been perceptibly affected by the tariff of 21 cents per barrel, a total of 253,000 bbls. having been brought into East Coast ports during the week ended July 2. It is expected that refiners will supply the greater part of the requirements of United States flag intercoastal vessels with imported fuel oil, as oil for delivery to these vessels (American registry ships in the East-West Coast service, via the Panama Canal) can be brought in duty free.

With bunker "C" quoted at a low of 50 cents in California and 55 cents at the Gulf, in cargo lots, it is not considered likely that any further increases can be made in East Coast quotations in the near future.

Diesel Oil

Contract deliveries are holding up well, and the market continued in quiet position during the week, with the posted price unchanged at $1.65 per barrel, in bulk, f.o.b. marine terminals, with the usual charge of 6½ cents per barrel for bunkering alongside within harbor limits.

Stocks of Diesel oil are not excessive in East Coast territory, and the statistical position of the market is reported to be extremely sound.

Routine demand for Diesel oil to domestic shore consumers was reported during the week.

Gas Oil

Slack demand for spot gas oil has kept the market in easy position and has prevented it from following the advances named some time ago on other heavy oils. The posted price for 27 gravity plus recycled gas oil held unchanged at 4 cents per gallon locally during the week, with a little shading of this figure reported.

California and Gulf gas oil quotations show too wide a differential at the present time for any upward movement in the East Coast price basis, it is reported. As it is, a leading California company now holds the contract for supplying the oil requirements of a large eastern utility company, obtained in competition with East Coast refiners.

Furnace Oil

Movement of furnace oils has held up surprisingly well thus far in the summer, refiners report, and considerable interest is being shown in the campaign of domestic oil burner manufacturers to make their business a year 'round affair by installation of hot water attachments to existing furnace installations.

Considerable contract business for the 1932-33 heating season has been booked by refiners and marketers already. During the past season, due to low oil prices, many consumers who contracted for No. 2 furnace oil frequently received deliveries of the No. 1 grade, at the quoted price for the No. 2 oil, but due to the higher refinery market at present, and the outlook for further price increases in the fall, it is expected that suppliers will discontinue that practice.

Petrolatum

Spot inquiry for petrolatum showed some improvement during the week and domestic consuming manufacturers, particularly in the cosmetics and pharmaceutical trades, were buying in larger volume for prompt and nearby delivery. Prices were steady and unchanged on all grades.

Lubs

Cylinder oils again worked into firmer ground during the past week and quotations were higher on several grades. Spot 650 steam refined was quoted at 25 to 26 cents per gallon, a half-cent increase, with 600 Pennsylvania flash at 26 to 27 cents and 630 flash at 31 to 32 cents, advances of one-half cent per gallon in each instance. Light bright stock was 1 cent higher at 34 to 35 cents, with the dark showing a corresponding increase to 32 and 33 cents per gallon. Red and pale oils were unchanged.

Spot demand was rather light during the week, due to recent heavy purchases by many buyers. Consumers of white mineral oil in the textile and other industries face a further increase in costs, as it is expected that this oil, which has hitherto been classed for duty purposes as a medicinal preparation, will carry the excise tax of 4 cents per gallon as a lubricating oil.

Refiners in the East are greatly interested in the step taken by the American Petroleum Institute for a study of used crankcase oil. A special committee appointed by the Institute is studying this problem and is expected to report on plans for the proper disposal of used crankcase oils. There is more than a suspicion in some quarters of the trade, evidently, that some of the extremely low-priced automobile lubricating oils which are now tending to demoralize retail lub oil prices are in reality "reclaimed" lubricating oil, marketed ostensibly as new crankcase lubricants.

Wax

Demand for the higher melting points showed a little improvement during the week, and 135-137 a.m.p. was steadier at 4½ cents a pound, with 133-135 a.m.p. holding unchanged at 4 cents. The lower melting points continued slow. Export buyers were still holding off the wax market, but sellers were looking for an early revival in buying.

Kerosene

Refiners reported continued quiet in the kerosene tank car market during the week, and posted prices ruled unchanged at 5½ to 6 cents per gallon for 41-43 water white, with the inside price representing the general going figure. Tank wagon kerosene sales were showing a little improvement, with prices holding steady. Rural consumption of kerosene has been stimulated by the sale at low prices of kerosene burning attachments for coal ranges.

Gulf Export Market

There were no inquiries or cargo fixtures reported in the Gulf market for either gasoline or kerosene last week, and quotations were nominally unchanged in both products. Rumania and Russia continued to undersell the U. S. Gulf market, and sharper competition from refineries in the Caribbean area has also developed.

Rumanian exporters have reduced their price on 730 gravity gasoline to $16.64 per ton, 25 cents under previous quotations, f.o.b. Constanza. Other products, however, have been advanced, as follows: Lamp oil, $6.80 per ton, 36 cents over the previous quotation; white spirit, first grade, $10.20 per ton, an advance of 85 cents; and second grade white spirit, $8.26 per ton, an increase of 36 cents. Fuel oil continues held at $3.58 per ton, f.o.b. Constanza, with gas oil at $5.96 per ton.

Shell and Standard of New Jersey, the two principal refining interests in the Caribbean (with plants at Curacao and Aruba, respectively) are understood to be moving considerable quantities of gasoline

(Continued on Page 34)

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21.

Gasolines

	July 12		July 5	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04½	.05	.04½	.05
60-62 400	.04⅝	.05	.04⅝	.05
64-66 390	.04¾	.05⅛	.04¾	.05⅛
64-66 375	.04¾	.05⅛	.04⅞	.05¼
68-70 350	.04⅞	.05¼	.05	.05¼
NORTH TEXAS—				
*U. S. Motor	.04⅜	.04½	.04½	.04⅜
60-62 400	.04½	.04⅝	.04⅝	.04¾
64-66 390	.04⅝	.04¾	.04¾	.05
64-66 375	.04¾	.05	.04¾	.05⅛
64-66 360	.04⅞	.05⅛	.04⅞	.05⅛
†NORTH LOUISIANA—				
*U. S. Motor	.05⅛		.05¼	.05½
60-62 400	.05⅜		.05⅜	.05½
†ARKANSAS—				
*U. S. Motor	.05¼		.05¼	.05½
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04⅝	.04½	.04⅝	.04⅝
60-62 400	.04½	.04⅝	04½	.04¾
64-66 375	.04⅝	.04¾	.04¾	.05
Aviation fighting grade	.05⅜	.05⅝	.05⅜	.05⅝
68-70 360	.04⅞	.05	.04⅞	.05⅛

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On July 12, in the case of the U. S. Motor and 60-62 400 endpoint grades where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06⅝	.06½	.06½	.06¾
60-62 400	.06½	.06⅝	.06⅝	.06¾
64-66 375	.06⅝	.06⅞	.06¾	.07
68-70 350	.06¾	.07	.06⅞	.07⅛

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas.

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.06½	.07½	.06	.07
58-60 400	.06¾	.07½	.06½	.07½
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.07¾	.08	.06¾	.07¼
Boston	.08		.07	
Baltimore, Md.	.07¾	.08	.06¾	.07
Charleston, S. C.	.07¾	.08	.06¾	.07
U. S. Motor, 65 octane and above:				
New York, (Bayonne)	.08¼	.08½	.07¼	.07½
Boston	.08½		.07½	
Baltimore, Md.	.08¼	.08½	.07¼	.07½
Charleston, S. C.	.08½	.08¾	.07½	.07¾
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05¾	.05¼	.05½
U. S. Motor, below 65 octane number	.05¼	.05½	.05	.05¼

Naphthas

	July 12		July 5	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04½	.04⅝	.04½	.04¾
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06¼	.06¾	.06¼	.06¾
ARKANSAS—				
48-50 450 (blending)	.05	.05⅛	.05	.05⅛
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04⅝	.04⅝	04⅝	.04⅝
Cleaners' naphtha, 56-58 gr. 200 i.b.p.-320 e.p.	.06¼	.06½	.06½	.06¾
Lacquer diluent, 180 i.b.p.-250 e.p.	.08½	.08¾	.08½	.08¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.09	.09½	.09	.09¼
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06	.06¼	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05¾	.06	.05¾	.06
Pet. thinner, 290, 300 i.b.p., 415 e.p., over 83° flash	.05	.05¼	.05¼	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06	.06¼
Petroleum spirits	.04⅛	.05¼	.04⅛	.05¼

Natural Gasolines

	July 12		July 5	
OKLAHOMA (Group 3)—				
Grade 18-55	.02¼	.02⅜	.02½	.02⅝
Grade 26-70	.01⅞	.02	.02⅛	
Grade 30-70	.01⅜		.02	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.02⅞	.03	.03	.03⅛
11 lb. v.p. (max.)	.03⅜	.03¾	.03⅞	.04
NORTH TEXAS—				
Grade 18-55	.02¼		.02½	
Grade 26-70	.01¾	.01⅞	.02	
Grade 30-70	.01¾		.01⅞	.02
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.02¾	.02⅞	.02⅞	.03⅛
11 lb. v.p. (max.)	.03½	.03¾	.03⅞	.04
NORTH LOUISIANA—				
Grade 26-70	.02⅛		.02¼	
CALIFORNIA—				
75-78 375	.04¾	.05½	.04½	.05½

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All grades have minimum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

	July 12		July 5	
OKLAHOMA (Group 3)—				
41-43	.02⅝	.02¾	.02⅝	.02¾
42-44	.02¾	.03	.02¾	.03
NORTH TEXAS—				
40-41	.02½		.02½	
41-43	.02½	.02¾	.02½	.02¾
†NORTH LOUISIANA—				
41-43	.03¼		.03¼	.03½
42-44	.03½		.03½	
†ARKANSAS—				
41-43	.03¼		.03¼	.03½
PENNSYLVANIA (inland refineries)—				
45	.04¾	.04⅞	.04¾	.04⅞
46	.04⅞	.05	.04⅞	.05
47	.05	.05¼	.05	.05¼
CHICAGO (Based on Group 3)—				
41-43	.02⅝	.02¾	.02¾	.03
42-44	.02¾	.03	.03	.03¼
*CALIFORNIA—				
38-40 high burning test	.04½	.04¾	.04½	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	July 12		July 5	
OKLAHOMA (Group 3)—				
39-40 prime white	.02	.02⅛	.02	.02⅛
38-40 light straw	.02		.01⅞	.02
NORTH TEXAS—				
38-40 light straw	.02	.02⅛	.02	.02⅛
CHICAGO (Based on Group 3)—				
38-40 light straw	.01⅞	.02	.01⅞	.02
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.03¾	.04	.04	.04¼

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	July 12		July 5	
OKLAHOMA (Group 3)—				
32-36 straw	.01¾		.01¾	
36-38 straw	.01¾	.01⅞	.01¾	.01⅞
38-40 straw	.01⅞	.02	.01¾	.02
39-41 prime white	.02	.02⅛	.02	.02⅛
NORTH TEXAS—				
38-40 straw	.01⅞	.02	.01¾	.02
†NORTH LOUISIANA—				
36-40	.02¼	.02½	.02¼	.02½
†ARKANSAS—				
32-36	.02¼	.02½	.02¼	.02½
CHICAGO (Based on Group 3)—				
32-36 straw	.01⅝	.01¾	.01⅝	.01¾
38-40 straw	.01¾	.01⅞	.01¾	.01⅞
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¼	.03½	.03¼	.03½
NEW YORK (Bayonne, N. J.)—				
32-36	.04	.04½	.04	.04½
36-40	.05	.05½	.05	.05½

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	July 12		July 5	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅜	.01½	.01⅜	.01½
U.G.I. (G.O.)	.01¼	.01⅝	.01¼	.01⅜
32-36, zero to 15 (G.O.) high flash	.01½	.01⅝	.01⅜	.01½
28-30, zero to 10	.52½	.55	.52½	.55
26-30, zero to 10	.50		.50	
24-26	.42½	.45	.42½	.45
20-22	.40	.45	.40	.45
16-20	.35	.40	.35	.40
Below 16	.32½	.35	.32½	.35
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	.01⅜
22-26	.45	.50	.45	.50
Below 20	.35	.45	.35	.45
NORTH LOUISIANA—				
32-36 (G.O.) zero	.02		.02	
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.32½	.35	.32½	.35
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	
28-30 (zero)	.55	.60	.55	.60
22-26	.40	.45	.40	.45
18-22	.25	.30	.25	.30
Below 18	.22½	.27½	.22½	.27½
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.50	.65
15-19 Bunker (tank car)	.45	.65	.45	.65
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.70		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
†Bunker C	.85		.85	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

	July 12		July 5	
Breeze (screenings)	3.50	3.75	3.50	3.75
Still runs	3.75	4.00	3.75	4.00
Lump and egg	5.00	5.50	5.00	5.50

*Refiners will absorb freight up to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	July 12		July 5	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09¼	.09½	.09¼	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13

500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¼
30 pour test	.12¾	.13	.12¾	.13
180 vis., No. 3, 25 pour test	.15¾	.16½	.15¾	.16½
200 vis., No. 3:				
Zero pour test	.22	.23½	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.18	.18½	.18	.18½
30 pour test	.17¾	.18	.17¾	.18
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07¼	.07	.07¼
300-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.07¾	.08
400-5-6	.08	.08¼	.08	.08¼
450-5-6	.08¼	.08½	.08¼	.08½
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.08¾	.09
700-6½ plus	.09	.09¼	.09	.09¼
750-6½ plus	.09	.09½	.09	.09½
900-6½ plus	.12	.13½	.12	.13½
NEW YORK (Bayonne, N. J.)—				
Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	
PENNSYLVANIA—				
122-124	.02		.02	
124-126	.02	.02¼	.02	.02¼
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02½		.02½	
125-127	.03		.03	
130-132	.03⅜		.03⅜	
133-135	.04		.04	
135-137	.04⅛		.04⅛	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02⅝		.02⅝	
Cream	.04⅝		.04⅝	
Lily white	.05⅝		.05⅝	
Snow white	.06⅝		.06⅝	

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	July 12		July 5	
630 light green	.07¾	.08	.07¼	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.23		.23	
150-160 D, 0-10	.22		.22	
150-160 D, 10-25	.21½		.21½	
150-160 D, 25-40	.21		.21	
150-160 E	.21		.21	
PENNSYLVANIA—				
600 S.R.	.14	.15	.14	.15
650 S.R.	.17	.17½	.17	.17½
600 Pennsylvania flash	.18	.18½	.18	.18½
600 D filtered	.22½	.23	.22½	.23
600 E filtered	.17	.17½	.17	.17½
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis.				
210-540-550 flash:				
10 pour test	.28	.30	.28	.30
15 pour test	.27	.27½	.27	.27½
25 pour test	.26	.26½	.26	.26½
35 pour test	.26		.26	

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	July 12		July 5	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾

Export Prices

GASOLINE

GULF COAST—	July 12		July 5	
U. S. Motor	.04½		.04½	
60-62 400	.04⅝		.04⅝	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-62 400 endpoint gasoline	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04¾		.04⅜	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.04	.05	.04	.05

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.22	.22½	.22	.22½
650, steam refined	.25	.26	.24½	.25
600, Pennsylvania flash	.26	.27	.25½	.26
630, Pennsylvania flash	.31	.32	.30½	.31
600, Warren E	.24½	.25	.24½	.25
600, Oil City E	.23½	.24	.23½	.24
Light 140-150 Bright Stocks	.34	.35	.33	.34
Dark 140-150 Bright Stocks	.32	.33	.31	.32

Crude Oil Prices

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas (Apr. 1, 1932)† ..... $ .98
East Texas (April 11, 1932)‡ ..... .98
Corsicana heavy* ..... .84
Other fields ..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.75
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.55
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932) 1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

Pennzoil Co.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.97
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.96
Includes Titusville district.
Group C 1.95
Includes Turkey and Tidiout districts.
Group D 1.94
Includes Bear Creek and Porkey districts.
Group E 1.92
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinsua districts.
Price depends on length of pipe line haul to plant at Oil City.

Tide Water Pipe Co.
(Effective April 25, 1932)

Bradford, Pa. $2.02
Allegany, N. Y. 2.02

Pure Oil Co.
(Effective April 25, 1932)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70
Kelly's Creek, W. Va. 1.70

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties.... See gravity table

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles, light (Aug. 24, 1931) ..... $ .75
Iles, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (Apr. 11, 1932) 1.00
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 2, 1931) ..... .51
Salt Creek ..... Mid-Continent gravity table
LaBarge ..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (Apr. 11, 1932) 1.29
Elk Basin (Apr. 11, 1932) 1.20
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) .... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.
*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

WEST TEXAS

Iatan and Westbrook.. Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States.)
Toborg, Pecos County (Apr. 11, 1932)†.. .55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

GULF COAST

Grade A and Grade B classifications discontinued by leading buyers.....
.....See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La.. See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Apr. 11, 1932)§ .....
.....See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶ .....
.....See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	Kansas and Oklahoma 1	North and Central Texas 2	East Central Texas 3	Gray County, Texas 4	Carson and Hutchinson Counties, Texas 5	Salt Creek and LaBarge, Wyoming 6	North Louisiana and Arkansas 7	Gulf Coast (Texas-Louisiana) 8	Cameron, Meadows, Louisiana 9	Iowa and Lockport, Louisiana 10
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over.	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

July 12, 1932

STANDARD OIL CO. (INDIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	17.1	17.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	16.9	4.0	9.3
Joliet	17.6	17.6	4.0	10.1
Peoria	17.6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.7	4.0	10.4
Des Moines	17.7	17.7	4.0	10.4
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	9.7
Minneapolis	18.4	18.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	18.3	18.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.6	13.6	4.0	10.6
Grand Rapids	17.5	17.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.6
Evansville, Ind.	18.2	18.2	5.0	9.9
Indianapolis	18.4	18.4	5.0	10.1
South Bend	18.7	18.7	5.0	10.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	11.5
K. C., Mo.	17.1	17.1	4.0	8.7
Springfield*	17.1	17.1	4.0	8.0
St. Louis*	16.6	16.6	4.0	9.4
St. Joseph	16.7	16.7	4.0	7.5
Wichita, Kans.	15.9	15.9	4.0	7.0
Bartlesville, Ok.	15.5	18.0	5.0	9.0

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade shown above.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 800 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 6 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 5.50 cents; No. 3 (32-36 zero), 200 gallons or more 4.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils
Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 6 cents and 7¼ cents; 32-36, 5⅛ cents and 7 cents; 28-30 4⅝ and 6¼ cents; 24-26, 4¼ cents and 5¼ cents; 18-22, 4 cents and 5 cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

SOUTHERN DISTRICT
Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.*	23.0	23.0	7.0	11.0
Augusta	22.5	22.5	7.0	14.5
Macon	23.0	23.0	7.0	13.0
Savannah	21.0	21.0	7.0	13.5
Birm'ham, Ala.	21.0	21.0	7.0	11.0
Mobile	21.0	21.0	7.0	10.0
Montgomery	22.5	22.5	7.0	14.5
Jackson, Miss.	21.0	21.0	7.0	13.5
Vicksburg	20.5	20.5	7.0	10.5
Jack'ville, Fla.	20.0	20.0	8.0	12.5
Miami	23.0	23.0	8.0	13.5
Pensacola	23.0	23.0	8.0	13.5
Tampa	22.0	22.0	8.0	11.5
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	18.0	18.0	6.0	10.5
Paducah	19.5	19.5	6.0	9.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 3 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

*An additional discount of 1 cent is offered to dealers effective October 6.

ROCKY MOUNTAIN DISTRICT
Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	21.0	5.0	12.5
Pueblo	18.0	21.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18.0	21.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	21.0	24.0	5.0	16.0
Albu'que, N. M.	18.0	21.0	*7.0	14.0
Boise, Idaho	23.5	26.5	6.0	18.0
Twin Falls	23.5	26.5	6.0	18.0

*One-cent city tax.

SOUTHWESTERN DISTRICT
Magnolia Petroleum Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	14.5	17.0	5.0	10.6
Fort Worth	15.5	17.0	5.0	9.0
Houston	14.5	17.0	5.0	10.0
San Antonio	14.5	17.0	5.0	9.0
El Paso	14.5	18.0	5.0	12.0
Texarkana	18.5	18.5	5.0	†11.0
Muskogee, Ok.	14.5	17.0	5.0	8.0
Okla. City	14.5	17.0	5.0	8.0
Tulsa	14.5	17.0	5.0	8.0
Ft. Smith, Ark.*	16.0	16.0	7.0	†9.0
Little Rock	*18.0	*18.0	7.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 2 cents to dealers.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND
Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	17.5	18.5	4.0	11.0
Philadelphia	16.5	17.5	4.0	11.0
Scranton	17.5	18.5	4.0	11.0
Allentown	17.5	18.5	4.0	11.0
Altoona	17.5	18.5	4.0	11.0
Erie	17.5	18.5	4.0	11.0
Dover, Del.	17.5	18.5	4.0	11.0
Wilmington	17.5	18.5	4.0	11.0
Springf'd, Mass.	17.5	18.5	4.0	8.0
Worcester	17.5	18.5	4.0	8.0
Boston	16 5	17.5	4.0	8.0
Providence, R.I.	14.5	15.5	3.0	9.0
Hartford, Conn.	16.5	17 5	3.0	8 0
New Haven	16.5	17.5	3.0	8.0

NEBRASKA
Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	18.0	17.0	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5 0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

CENTRAL SOUTH DISTRICT
Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	19.0	19.0	*7.0	†12.0
Baton Rouge	18.0	18.0	6.0	10.0
Alexandria	19.0	19.0	*7.0	10.0
Lafayette	19.0	19.0	*7.0	†10.0
Lake Charles	19.0	19.0	*7.0	†12.0
Shreveport	18.0	18.0	6.0	†12.0
Knoxville, Tenn.	22.0	22.0	8.0	13.5
Memphis	20.5	20.5	8.0	9.0
Chattanooga	22.0	22.0	8.0	13.5
Nashville	21.5	21.5	8.0	13.5
Bristol	22.5	22.5	8.0	14.9
Lt. Rock, Ark.	19.0	19.0	7.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1-cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

OHIO
Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	18.0	18.5	5.0	*13.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

PACIFIC COAST TERRITORY
Standard Oil Co. of California*

	Gasoline: Tank truck†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	25.0	24.0	5.0	19.0
Portland, Ore.	21.0	20.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

ATLANTIC COAST DISTRICT
Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	16.9	17.9	4.0	11.2
Newark	16.2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5.0	10.0
Baltimore	17.9	18.9	5.0	7.0
Cumberland	19.4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17.4	3.0	10.0
Danville, Va.	20.6	21.6	6.0	11.9
Norfolk	19.0	20.0	6.0	10.2
Petersburg	20.1	21.1	6.0	11.4
Richmond	19.4	20.4	6.0	10.7
Roanoke	20.6	21.6	6.0	11.9
Charles'n, W.Va.	19.3	20.3	5.0	11.6
Parkersburg	17.9	18.9	5.0	10.2
Wheeling	18.9	19.9	5.0	11.2
Charlotte, N. C.	22.2	23.2	7.0	12.5
Hickory	22.4	23.4	7.0	12.7
Mt. Airy	22.5	23.5	7.0	12.8
Raleigh	22.0	23.0	7 0	12.3
Salisbury	22.3	23.3	7.0	12.6
Charleston, S.C.	20.0	21.0	7.0	10.3
Columbia	21.9	22.9	7.0	12.2
Spartanburg	22.2	23.2	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Prices shown above are for standard gasoline.

NEW YORK AND PART OF NEW ENGLAND DISTRICT
Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	17.0	18.0	4.0	9.0
New York	14.5	14.5	4.0	9.5
Buffalo	17.5	18.5	4.0	9.0
Rochester	17.5	18.5	4.0	9.0
Syracuse	17.5	18.5	4.0	9.5
Boston, Mass.	14.5	15.5	4.0	8.0
Augusta, Me.	18.0	19.0	4.0	9.0
Manch'tr, N. H.	17.5	18.5	5.0	8.0
Burlington, Vt.	18.5	19.5	5.0	8.5

TANK WAGON CHANGES

Standard Oil Co. of Kentucky, effective June 27, reduced gasoline tank wagon and service station prices 1 cent at Birmingham, Ala.; effective July 2, reduced gasoline tank wagon and service station prices 1 cent at Lexington, Ky.; effective June 30, company reduced gasoline tank wagon and service station one-half cent.

Magnolia Petroleum Co. effective June 27 reduced kerosene tank wagon price 1 cent in Oklahoma; effective July 2, company reduced gasoline tank wagon and service station prices 1 cent at Texarkana and advanced gasoline tank wagon and service station prices one-half cent at Fort Smith, Ark.

Atlantic Refining Co., effective July 2, advanced gasoline tank wagon and service station prices .2 (two-tenth) cent per gallon and reduced gasoline tank wagon and service station prices .1 (one-tenth) cent at New Haven, Conn.

Standard Oil Co. of Louisiana, effective July 2, reduced gasoline tank wagon and service station prices 2 cents at all points in territory (Louisiana and Tennessee) except Bristol, Tenn., where no change was made. No change was made at Little Rock, Ark.; effective June 28,

(Continued on Page 31)

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. §The Texas Company. †Yount Lee Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS

Smackover, Ark. (all grades)	$ .65
Urania, La. (Apr. 12, 1932)	.40
East El Dorado, Ark. (Apr. 6, 1932)	.65
Stephens, Ark., below 29° (Apr. 12, 1932)	.61
Stephens, Ark., 29° and above (Apr. 12, 1932)	.66
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.64
Mirando (Apr. 1, 1932)*	.90
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski§	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset†	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 80 cents for Mirando, April 11. §Thrall prices same as North Central Texas less 19½ cents per cwt. freight. †Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

MIDDLE WESTERN STATES
Ohio Oil Co.
(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (May 17, 1932)*	.65
Muskegon†	.95
Muskegon‡	.85
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

MEXICO

Panuco*	$ .47

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

CANADA

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.80
Crude naphtha	3.33
Discolored naphtha	3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

NEWS FOR SALES DEPARTMENTS

Oklahoma Suggests Method of Handling Publicity on Taxes

The use of blank slips properly filled out for each customer has been suggested by the Oklahoma Petroleum Marketers Association as the best method of bringing the high gasoline taxes to the attention of consumers in the State. The slip, which would be filled out and handed to customers after each purchase, would contain the following information:

"THE BLANK OIL COMPANY

"Dear friend:

"You have just paid us for

(1) ..... gallons of gasoline $.....
(2) State tax at 4 cents . . $.....
(3) Federal tax at 1 cent . $.....
(4) Total sum of . . . . $.....

"We believe that Item 2 is entirely too high and should be reduced to 2 cents per gallon as soon as it can be done legally. We respectfully ask you to support candidates for legislative position who will work for such reduction."

Petitions are now being circulated in Oklahoma for a vote this fall on the question of reducing the state gasoline tax from 4 to 2 cents. The association has gone on record as favoring this reduction. In a formal resolution the association went on record as favoring the elimination of exemptions in the payment of the gasoline tax. The reduction also favors a change in the state law to provide that the 2-cent per gallon tax should be levied on naphtha, kerosene, distillates and any other commodity that is used or can be used in blending or manufacturing motor fuel for internal combustion engines.

F. R. PHILLIPS OFFERS TROPHY AT AIR RACES

Frank R. Phillips, president of Phillips Petroleum Corp., Bartlesville, Okla., has offered a special trophy and $2,500 in cash prizes to the winners of a new airplane speed event that will be run in conjunction with the 1932 National Air Races, it has just been announced by Clifford W. Henderson, managing director of the Nation's annual aviation racing classic.

The award will be known as the Woolaroc Trophy and will be presented to the flier making the best time in flying six laps around the 10-mile closed course that has been laid out at the Cleveland Municipal Airport, scene of the National Air Races, which will start August 27 and continue through September 5. The race for the Woolaroc Trophy will be staged Wednesday, August 31.

The purpose in offering the trophy, according to Mr. Henderson, is to stimulate the design of faster and more efficient airplanes in the low horsepower ratings. To achieve this end, no restrictions whatever have been placed on contestants except that the engines with which their planes are powered may not have more than 800 cubic inches of piston displacement.

STANDARD LICENSES ALEMITE

The Lubrication Corp., owned jointly by Standard Oil Co. and Bendix Aviation Corp., has granted to the Alemite Corp., a subsidiary of Stewart-Warner Corp., a license under its patents relating to automobile chassis lubrication equipment. The Alemite Corp. will manufacture a complete line of equipment for Lubrication Corp. which will offer it for sale to oil companies.

Motor Buses Account for 3 Per Cent of Domestic Gasoline Consumption

Motor buses are a factor of increasing importance in the consumption of gasoline, accounting for nearly 3 per cent of the 1931 domestic demand as compared with 1.5 per cent of the 1925 demand, according to information compiled by H. A. Breakey and E. R. Swanson of the Petroleum Economics division of the U. S. Bureau of Mines.

The report also shows that the increased gasoline demand results largely from the gain in motor fuel consumption per bus rather than from an increase in the number of buses operated. The average gasoline consumption by intercity buses increased from 5,061 gallons in 1924 to 11,585 gallons in 1931, while that of city buses has increased from 6,616 gallons in 1924 to 9,176 gallons in 1931.

Although the annual mileage traveled by the average bus has increased, the enlarged gasoline demand has been due principally to the decreased mileage obtained per gallon of gasoline consumed. The use of larger buses is a major factor in the increased gasoline consumption per bus-mile.

The monthly gasoline demand by the city bus does not vary as widely as that of the intercity bus. The use of intercity bus for vacation travel contributes to the increased summer dematnd for gasoline. The investigators also believe that further increases in bus consumption of gasoline is to be expected.

Gasoline required for the operation of buses is purchased usually on annual contracts, although some purchases are made on the open market, according to the report. Payment for gasoline purchased on contract usually is based on the prevailing tank wagon quotation, although some contracts are written at a fixed price. A sliding scale, with a price graduated according to the amount of gasoline taken, is another basis for payment.

Some attempt has been made to put the bus companies in a more effective position for contracting their gasoline requirements by getting them to purchase through state bus associations. This might benefit small operators, but the plan does not appear to have met with much favor, the report states. Some of the objections met are that certain bus companies favor the use of a particular brand of gasoline; that the price of gasoline is such that the distributors could not give a better price to an association than is given to an individual company. Certain large companies report that their purchases are of such quantities that there would be no advantage to them to join other companies in their contracts.

The large interstate operators have their gasoline delivered to various points where it is convenient to reservice their buses. Some operators stated in their reports to the bureau that they attempt to have deliveries in each state proportionate to the mileage traveled therein, so that the gasoline tax paid will be divided among the states in proportion to the use of roads.

The smaller intercity companies and the city companies usually have only one or two storage sites for the gasoline, located at the center of their operations. The buses carry sufficient gas to be able, in most cases to make a round trip without refilling their tanks. The city buses, having an opportunity to refill more often than the intercity buses, do not carry a great amount of gasoline, their capacity ranging from about 30 to 70 gallons. Gasoline usually is supplied each time the bus comes to the garage.

The following table summarizes the Bureau of Mines report:

CITY BUS DATA

Average Miles Traveled per Bus

Year—	New England	Middle Atlantic	North Central	South Central	Pacific Coast	Total U. S.
1924	27,084	35,586	.....	.....	42,559	36,749
1925	30,688	36,084	41,868	.....	41,392	38,272
1926	28,108	35,134	41,022	.....	41,760	37,425
1927	29,049	34,612	40,510	36,362	41,702	37,120
1928	29,005	36,502	39,717	37,472	44,134	37,498
1929	32,145	36,603	38,356	36,921	44,851	37,410
1930	32,205	36,159	35,125	38,352	45,487	35,779
1931	31,455	36,607	34,604	37,898	42,988	35,590

Gallons of Gasoline Consumed per Bus

Year—	New England	Middle Atlantic	North Central	South Central	Pacific Coast	Total U. S.
1924	5,489	5,969	.....	.....	7,160	6,616
1925	5,725	6,330	8,457	.....	7,764	7,434
1926	5,893	6,330	8,155	.....	8,606	7,401
1927	6,397	6,929	8,762	5,958	8,762	7,776
1928	6,947	9,057	8,835	7,627	9,439	8,685
1929	8,719	9,652	9,328	8,172	10,669	9,376
1930	8,833	9,732	8,864	7,888	10,775	9,191
1931	8,911	10,099	8,612	7,237	10,752	9,176

INTERCITY BUS DATA

Average Miles Traveled per Bus

Year—	New England	Middle Atlantic	North Central	South Central	South Atlantic	Pacific Coast	Total U. S.
1924	.....	.....	.....	.....	.....	52,434	48,150
1925	.....	.....	.....	.....	.....	49,648	46,507
1926	37,271	.....	.....	.....	.....	47,885	44,942
1927	36,619	.....	.....	.....	.....	36,903	40,782
1928	37,462	32,870	65,738	.....	.....	35,647	40,561
1929	37,654	43,312	61,147	52,747	.....	38,379	47,375
1930	37,516	44,289	63,682	63,512	.....	42,847	52,826
1931	39,280	.....	59,523	67,695	57,511	44,909	53,562

Gallons of Gasoline Consumed per Bus

Year—	New England	Middle Atlantic	North Central	South Central	South Atlantic	Pacific Coast	Total U. S.
1924	.....	.....	.....	.....	.....	6,140	6,061
1925	.....	.....	.....	.....	.....	6,185	6,578
1926	6,997	.....	.....	.....	.....	6,547	7,561
1927	7,112	.....	.....	.....	.....	5,437	7,044
1928	7,203	6,379	12,864	.....	.....	5,782	7,247
1929	7,518	9,486	13,767	10,328	.....	6,605	9,708
1930	7,408	10,012	14,836	12,825	.....	8,359	11,201
1931	8,306	.....	14,108	13,541	10,419	9,132	11,585

(Continued on Page 34)

Improvement Shown In Registrations Starting July 1

NEW YORK, July 9.—The outlook for gasoline consumption during the closing half of 1932 has been appreciably brightened by the pronounced increase in automobile registrations since July 1. Licensing bureau in New York State were swamped with applicants, and it is reported that a similar sharp jump in registrations has been experienced in other states.

Many automobile owners, it develops, refrained from licensing their cars for the full year, as an economy measure, but laid their automobiles up in "dead storage" until after June 30, when license plates could be secured at 50 per cent of the regular annual rate. As a result of the exceptionally heavy registration for the second half of the year, it is believed, the drop of 1,000,000 automobile registrations reported for the country as a whole as of January 1, 1932, will be considerably offset by the half-year registrations now being made.

This development, which some statisticians failed to take into consideration in compiling their estimates as to probable gasoline demand for the year 1932, is expected to substantially brighten the general marketing picture and to return larger gasoline gallonage totals than many refiners had looked for.

Notwithstanding the high taxes of gasoline, standard quality motor fuel can still be bought at extremely low prices in metropolitan New York, probably the heaviest gasoline consuming territory in the United States. Leading brands of gasoline are posted at service stations at prices figuring out 7 gallons for $1.02, and despite current economic conditions this price is still low enough to permit widespread use of automobiles.

Although the current outlook for gasoline consumption is better than refiners had looked for, it is indicated that the policy of curtailed refinery production of motor fuel will be adhered to throughout the summer months, with increased demand taken care of partly by withdrawals from storage.

FLORIDA'S REVENUE LESS WITH HIGH TAX

Increasing the Florida gasoline tax from 6 to 7 cents as was done the past year has decreased the State's revenue in the collection of the tax, according to Peter Van Geyt, secretary of the Tampa Motor Club.

"In April, 1931, total sales of 22,316,300 gallons brought $1,341,677 in revenue, while 12 months later the sales had dropped to 18,647,241 gallons and the revenue under the heavier tax to $1,305,306, a decrease of 3 per cent," said Mr. Van Geyt.

"During May, 1931, the total sales were 20,110,981 gallons, which brought $1,206,658 under the 6-cent tax. The sales in May, 1932, dropped to 16,391,975 gallons and the revenue to $1,147,438 under the larger tax, a decrease of 5 per cent.

JUNE MOTOR OUTPUT

The National Automobile Chamber of Commerce estimates June production of passenger cars and trucks in the United States and Canada at 190,600 units against 193,270 in May, a decrease of 1½ per cent. Six months' output is estimated at 912,353 units, against 1,639,027 units in the 1931 period, a decrease of 44 per cent.

NATURAL GASOLINE MANUFACTURE

Bill Provides for Complete Recording Of Gasoline Sales

WASHINGTON, D. C., July 11.—Early in the process of developing regulations for the taxing of motor fuels by the Federal Government as part of the Revenue Act of 1932, representatives of the natural gasoline industry were called into consultation with the representatives of the Treasury Department. At that time one of the suggestions made was to the effect that registered dealers be recognized by the Government as agents of the natural gasoline industry, whether retailers or wholesalers, and that these registered dealers prepare reports monthly regarding every transaction handled during that month.

Since the levy was intended as a manufacturers' tax and because all natural gasoline does not move to refineries for further processing or blending, the burden of the tax is placed on the natural gasoline manufacturer unless suitable records are presented showing the material is moving to refineries or to jobbers who will blend it to make into a motor fuel.

The purpose of suggesting the registering of dealers was to aid the Federal and state agents in tracing tax evaders. As the suggestions were presented to the Treasury Department they would have been applied to other oil products as well, such as special naphthas, kerosene, etc., or to any other product that could go into motor fuel to evade tax payments. It is questionable whether the Treasury Department intended to expand the idea in the final regulations, but recently a bill was presented by Senator Reed of Pennsylvania and acted upon favorably in committee which provided for a similar recording of data. It requires every consignor of liquid fuels across state lines to report not later than the twentieth of the following month, every shipment made by him in the preceding month. The report, to be made to the Bureau of Mines, requires the giving of the following facts: Date and point from which shipment was made; name of every consignee and of consignor if shipped to the consignor; destination of every shipment; quantity in gallons; quality or kind of liquid fuel shipped; means or methods of transportation, including the name of the vessel, number of the tank car, or license number of the tank truck; and name and address of consignor.

As introduced, the bill requires the officer in charge of the Bureau of Mines to make the information gathered by him available to the taxing authorities of the states. Now that the national Government has a tax on gasoline, the information, by amendment of the bill, is to be made available to the Federal taxing authorities as well.

NEW PLANT IN FISH POOL

The Empire Oil & Refining Co.'s compressor plant at their "Wilson" gasoline plant near Seminole, Okla., has been moved to the new "Fish" Pool near Wewoka, Okla. The material moved consisted of building, engines, water storage tank, cooling tower, plant piping and accessories. The work also included gathering lines, electric lines, etc., and was done under general contract by the Stearns Roger Manufacturing Co. of Denver, Colo.

SMALL WYOMING PLANT

The Ohio Oil Co. has installed a small gasoline plant in the Lance Creek Field of Wyoming. The gasoline will be sold locally.

United States Output for May Lowest Daily Average in Past Five Years

The daily average production of natural gasoline in the United States during May was 4 per cent less than in April and 21 per cent less than May of last year. The May production, according to the data of the Bureau of Mines, was the lowest monthly average in five years and culminates a steady decline in production for over two years.

As shown in the accompanying table, the decline in May output was general throughout the country with the largest decrease in the Appalachian district.

The May production was 62.6 per cent of the output for October, 1929, which was the largest monthly production in the history of the natural gasoline industry. The following table shows the October, 1929, production by areas with the decreases when compared with May of this year:

TABLE SHOWING NATURAL GASOLINE PRODUCTON IN UNITED STATES IN OCTOBER, 1929, AND MAY, 1932

(Thousands of gallons)

	Oct., 1929	Decrease May, 1932
Appalachian	8,900	4,100
Illinois, Kentucky, etc.	1,300	700
Oklahoma	59,400	26,000
Seminole, etc.	30,400	20,300
Osage County	7,600	3,600
Rest of State*	21,400	.....
Kansas	2,500	600
Texas	40,700	11,000
Panhandle	19,300	5,100
North Texas	3,900	1,500
West Central	13,800	6,600
Rest of State*	3,700	.....
Louisiana	6,300	2,300
Arkansas	2,900	1,100
Rocky Mountain	4,400	†700
California	79,600	31,900
Long Beach	20,100	10,600
Ventura Avenue	7,100	4,000
Seal Beach*	4,300	.....
Huntington Beach	3,700	2,000
Santa Fe Springs	26,200	17,500
Rest of State*	18,200	.....
Total (gallons)	206,300	77,000
Daily average	6,650	2,479
Total (barrels)	4,912	1,833
Daily average	158	59

*Not available on comparable basis. †Increase.

It will be noted that every area in the United States has shown a substantial reduction in production since October, 1929, with the exception of the Rocky Mountain area. That section was producing natural gasoline on a settled basis in 1929 and the new production available although relatively small has more than offset the declines in the older fields. The bulk of the natural gasoline production for the Rocky Mountain area comes from the Salt Creek Field of Wyoming. The output in that area is largely owned by the Midwest Refining Co. (Standard Oil Co. of Indiana) and this has permitted an orderly development of the field which has been reflected in the long life of the wells from which the casinghead gas is obtained.

The three main states of the natural gasoline industry—Oklahoma, Texas and California—all show large declines in output during the past 2½ years. Oklahoma production which totaled 59,400,000 gallons in October, 1929, had dropped to 33,400,000 gallons in May of this year which means that the May output was 56 per cent of the peak production.

Within the State of Oklahoma, natural gasoline production in May for the Greater Seminole area totaled 10,100,000 gallons, a decrease of over 20,000,000 gallons when compared with October, 1929 The Greater Seminole area has been one of the largest producers of natural gasoline in the history of the industry and was producing near its peak in the fall of 1929. Since that time there has been a steady decline although all things considered the "staying" qualities of the field from the standpoint of natural gasoline output have been unusual. Osage County, which was one of the largest producers of natural gasoline previous to 1925 was still producing 7,600,000 gallons monthly in the fall of 1929 but this production had declined to 4,000,000 gallons by May of this year. The Oklahoma City Field was not an important factor in natural gasoline production in 1929 but now is the second largest field in the State. Its production of more than 7,000,000 gallons monthly has helped to offset part of the decline in the older fields.

(Thousands of gallons)

	Natural gasoline: Production May, 1932	Production Apr., 1932	Production May, 1931	Stocks end of month May, 1932	Stocks end of month Apr., 1932	Blended motor fuel May, 1932: Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	4,800	6,200	5,900	6,807	6,827	50	71	139
Ill., Ky., Ind.	600	700	800	434	798	...	...	...
Oklahoma	33,400	33,300	43,700	16,993	14,476	29	66	28
Oklahoma City	7,100	7,200	5,986	3,196	3,332	...	...	...
Osage County	4,000	3,900	5,800	2,572	2,242	3	3	4
Seminole	10,100	10,700	18,400	6,021	4,408	2	...	...
Rest of State	12,200	11,500	13,600	5,204	4,494	24	63	24
Kansas	2,200	2,200	2,700	1,433	1,266	29	1	35
Texas	29,700	29,900	35,700	11,698	12,583	7	1	1
Panhandle	14,200	14,400	17,400	5,635	5,962	1	1	...
North Texas	2,400	2,100	2,600	928	1,128	6	...	1
West Central	7,200	7,600	10,000	4,326	4,205	...	...	...
Rest of State	5,900	5,800	5,700	809	1,288	...	...	...
Louisiana	4,000	4,300	4,900	1,198	1,211	10	4	8
Arkansas	1,800	1,800	2,400	335	309	...	...	6
Rocky Mountain	5,100	5,000	6,100	686	738	...	...	...
California	47,700	46,900	60,700	4,705	6,436	...	...	...
Huntington Beach	1,700	1,550	1,900	.....	.....	...	...	...
Kettleman Hills	11,300	10,900	15,600	.....	.....	...	...	...
Long Beach	9,500	9,400	11,800	...	...	...	...	...
Santa Fe Springs	8,700	8,700	11,200	.....	.....	...	...	...
Ventura Avenue	3,100	3,000	4,800	...	...	...	...	...
Rest of State	13,400	13,400	15,300	.....	.....	...	...	...
Total	139,300	136,300	162,900	44,279	44,584	125	143	217
Daily average	4,171	4,340	5,255	.....	.....	4	5	...
Total (thousands of barrels)	3,979	3,182	3,879	1,054	1,061	3	3	5
Daily average	99	103	125	.....	.....	...	...	...

Prepared under the supervision of G. R. Hopkins, Petroleum Economics Division E. B. Swanson, chief economist, Petroleum Economics Division.

Texas Output Less

Texas has not shown as large a decline in production over the past 2½ years as has Oklahoma. However, its May output was only 73 per cent of the October, 1929, figure. The Texas Panhandle, Central West Texas and North Texas areas have shown decreases for the two periods under consideration but new plants in East Texas have served to slow up the total decline. It is not expected at this time, that East Texas will become a major factor in Mid-Continent natural gasoline production due to the fact that the quantity of casinghead gas available from the wells is relatively small.

California

The California production of 47,700,000 gallons in May of this year was 60 per cent of the total for October, 1929. This decline developed despite the fact that Kettleman Hills, which is now one of the largest producers of natural gasoline, in 1929 was not an important factor. Santa Fe Springs which produced 26,200,000 gallons in October, 1929, declined to 8,700,000 gallons in May. Long Beach produced 20,100,000 gallons in October and 9,500,000 gallons in May. There were similar declines in practically all the fields of the Los Angeles Basin. Kettleman Hills which did not have sufficient production to be given a separate listing in Government reports during 1929, in May accounted for 11,300,000 gallons of the 47,700,000-gallon total for the State.

Changes in Processing

The large decline in total production for the entire country is only partially due to an actual decline in the availability of casinghead gas. No accurate figure is available but it is estimated by some that the decline in many areas is due more to changes in manufacturing methods than it is to a decline in the gas supply. There has been a trend in all areas toward the production of low vapor pressure gasolines. Instead of producing gasolines of high gravity with vapor pressures of from 22 to 40 pounds, many manufacturers have changed their equipment to manufacture gasolines of vapor pressures as low as 6 pounds. In reducing the vapor pressures from 10 to 20 pounds, manufacturers usually take volume losses in production ranging from 20 to 50 per cent. This trend varies with different areas depending both on manufacturing facilities and also marketing conditions. Some manufacturers have had no difficulty in securing markets for their regular grades of natural gasoline while others have been forced to make the specially stabilized grades in order to obtain outlets for their products.

Another factor has been the low prices for natural gasolines over the past year and a half. These prices have been so low that manufacturers found it unprofitable to operate their small plants. Many of these plants were being operated at only a small fraction of their rated capacities.

The owners found that they could not break even in the operation of these plants and shut them down. Some of these plants will resume operations should market conditions become more favorable. The shut down plants include units operating with gas of very low gasoline content. Proration programs in some of the flush fields also has served to reduce the quantities of gas available.

Stocks of natural gasoline reflected the decline in output and showed a small decline, the first withdrawal since October, 1931.

The accompanying table summarizes the Bureau of Mines report on natural gasoline production for May, 1932.

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NEWS FOR PETROLEUM REFINERS

Government Report Shows Growth of Motor Fuel Lines

Great progress has been made recently in the distribution of motor gasoline by pipe line. According to a study of the subject just published by the U. S. Bureau of Mines, motor gasoline has been transported about refineries and from refineries to loading racks and docks by means of pipe lines ever since this fuel has been in demand. Pipe line systems for transporting motor gasoline from refineries to distribution centers have been discussed repeatedly by refiners and marketers, but for a number of years the plans were considered unfeasible. Several years ago, a group of Mid-Continent refiners considered the construction of a motor gasoline line to extend from Oklahoma to some Mississippi River point, but the line was never built. The chief objection raised at that time to such a system was that gasoline specifications used by the various refiners were not uniform and as it was believed necessary to mix all grades of gasoline in pipe line movement, no refiner could be sure that he could withdraw from the system gasoline that would meet his specifications.

Since many states have adopted more uniform specifications for gasoline, this objection has been overcome in a large measure. Also it appears that by proper operation of the lines, gasoline of varying grades can be transported without mixing to an appreciable extent.

The first long line used for the transportation of motor gasoline from the refinery to markets was that of the Standard Oil Co. of New Jersey. In the fall of 1929, this company began transporting motor gasoline inland through its Tuscorora pipe line from its Bayway refinery, on New York Harbor, to various points in New York and Pennsylvania. The pipe line had formerly been used to transport crude oil from fields in western Pennsylvania to the Bayway refinery.

As of August, 1931, the total length of motor gasoline pipe lines in operation or under construction in the United States was 3,210 miles and their total maximum delivery 89,000 bbls. per day. For a number of years plants producing

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JOHN D. ROCKEFELLER CONFIDENT OF FUTURE

NEW YORK, July 9.—John D. Rockefeller, Sr., who celebrated his ninety-third birthday here this week, is optimistic regarding the future business outlook. In a statement issued on his birthday, the dean of the American oil industry said:

"These are days when many are discouraged. In the 93 years of my life, depressions have come and gone. Prosperity has always returned and will again.

"And now, on this my birthday, I desire to reaffirm my belief in the fundamental principles upon which this country was founded—liberty, unselfish devotion to the common good, and belief in God.

"As a nation, looking proudly to our past where it has been noble, and recognizing with humility our mistakes of extravagance, selfishness and indifference, let us, with faith in God, in ourselves and in humanity, go forward, courageously resolved to play our part worthily in building a better world."

Refiners Form Corporation to License Fractional Distillation Patents

For the purpose of overcoming difficulties which have arisen through diverse ownership of related and complementary patents, the Atlantic Refining Co., Standard Oil Co. (Indiana), Standard Oil Co. (New Jersey) and Foster Wheeler Corp. have reached an agreement under which each of them will grant licensing rights to a common agent for the use of their fractional distillation patents.

To make this effective they have organized the Petroleum Distillation Corp., incorporated in Delaware, with an authorized capitalization of 2,000 shares of no par value stock. This stock will be purchased by the owners of the patents, that is, Standard Oil Development Co., Standard Oil Co. (New Jersey), the Atlantic Refining Co., Standard Oil Co. (Indiana), and Foster Wheeler Corp.

The officers are T. G. Delbridge of the Atlantic Refining Co., president; J. J. Brown of Foster Wheeler Corp. and Robert E. Wilson of Standard Oil Co. (Indiana), vice presidents; and these men together with L. B. Nutting of Foster Wheeler Corp., E. R. Cox of the Atlantic Refining Co., B. K. Brown of Standard Oil Co. (Indiana), F. A. Howard and W. R. Carlisle of Standard Oil Development Co. will be directors.

The new company has acquired licensing rights under the oil distillation patents of the three refining companies named and Foster Wheeler Corp., and has made the last named corporation its agent for granting licenses under the distillation patents of all the companies interested.

During the past few years, the older methods of oil distillation have been largely replaced by new and more scientific processes, the most successful use of which involves the application of a large number of new inventions. The companies interested in the Petroleum Distillation Corp. have been leaders in the development of these new inventions and for some time past have been in negotiation in an effort to find a satisfactory basis under which each could use the complementary inventions of the others. The Atlantic Refining Co. and Foster Wheeler Corp. entered into an arrangement of this kind some time ago. To make this agreement completely effective for its intended purpose of permitting the construction of the most efficient modern distillation units, it was found necessary to broaden the arrangement to include the other two companies. This resulted in the formation of the Petroleum Distillation Corp., which by acquiring rights under patents of all the interested companies, becomes able to grant the necessary licenses not only to them, but also to all other refiners.

Experience of the interested companies indicates considerably reduced investment costs and appreciable savings in fuel, labor and repair costs by use of pipe stills embodying all of their important inventions. The intention of the Petroleum Distillation Corp. is to make all of their inventions available to all refiners on a uniform basis representing a small proportion of the savings effected.

Foster Wheeler Corp. in its capacity as agent for Petroleum Distillation Corp. will negotiate the necessary licenses and contracts with oil refiners.

Use of Reflux Oil Factor in Cracking Case Against Root

NEW YORK, July 11.—Circulation of clean reflux oil in relation to present day cracking operations if maximum yield of gasoline and maximum antiknock value are to be obtained economically, is one of the main issues in the suit brought by Universal Oil Products Co., owner of the Dubbs cracking process, against Root Refineries, Inc., now being tried before Judge John P. Nields in the U. S. District Court in Wilmington, Del.

The Universal company charges Root with infringing two of its patents by operating in its refinery at El Dorado, Ark., cracking equipment said to be designed and built by Winkler-Koch Engineering Co., Wichita, Kans. The two patents alleged to be infringed are No. 1,392,629 issued to C. P. Dubbs October 31, 1921, and No. 1,537,593 issued to Gustav Egloff, January 5, 1926. Claim 1 of Patent No. 1,392,629 follows: "A process of converting relatively heavy into lighter hydrocarbons consisting in passing a stream of oil through a zone where the oil is heated to a cracking temperature but without substantial vaporization, passed thence to and through a zone where vaporization takes place, removing the vapors, subjecting them to reflux condensation, returning reflux condensate for further cracking, removing the residue after said vaporization from the system without permitting intermingling of any substantial portion thereof with the oil in the heating zone and maintaining a pressure upon the material during distillation."

Claim 2 from Patent No. 1,537,593 reads: "A process of oil conversion, consisting in maintaining a body of heated

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START REFINING BLACK CRUDE OIL IN WYOMING

DENVER, Colo., July 9.—The Grass Creek Field, in Hot Springs County, Wyoming, which has produced around 25,000,000 bbls. of light oil since the discovery well came in in 1914, will soon be running black oil from the Morrison, Embar and Tensleep sands to the Standard Oil Co. (Indiana) refinery at Greybull, Wyo. This refinery was equipped with cracking stills with a charging capacity of 2,500 bbls. daily last year especially to run on black oil. The Midwest Refining Co. and the Ohio Oil Co. have nine wells completed in the deeper pay, all of which have been shut in and only the wells in the Frontier have been produced. It is planned to run at least 50,000 bbls. under the arrangement completed and future deliveries will depend upon market conditions. The field has produced light oil from three sands in the Frontier at 800 to 1,500 feet. In 1923 the first discovery was made in the black oil horizons.

The black oil is found at depths ranging from 3,000 to 4,500 feet. An increasing demand for road oil and the high octane rating of the gasoline from the Grass Creek black oil were factors which brought about the decision to begin marketing. In 1928 the Ohio Oil Co. completed its No. 1 Washakie, SW cor. Section 17-46-98, in the Embar-Tensleep at 4,525-4,675 feet with an initial production of 100 bbls. per day. This well is located 1,500 feet out from the nearest producer and proved up close to 1,000 acres inside the contour upon which it is located. The Madison, which lies below the Tensleep and which is the thickest producing horizon in the Rocky Mountain states as disclosed on the Garland Dome, has never been tested. While the field ranks fifth in size for light oils, the black oil formations are expected to be productive over a much larger area. The crude from the Embar-Tensleep averages 24.7 degrees gravity. It shows about 16.7 per cent gasoline and naphtha, 3.8 per cent kerosene, 21.5 per cent distillate, 18.5 per cent gas oil and 14.9 per cent asphalt. Light oil runs from the field at present are around 2,000 bbls. daily.

ANGLO-PERSIAN STARTS WORK ON NEW REFINERY

NEW YORK, July 9.—Anglo-Persian Oil Co., Ltd., has completed the installation of a vacuum distillation plant at its refinery at Llandarcy, England, for the manufacture of lubricants, and has started work on the construction of a new French refinery near Marseilles, according to the company's annual report, just received here.

Net production by the company from its fields at Masjid-i-Sulaiman and Haft Kel during the past year were reported at 5,750,000 tons, with production being held down to the quantities which could be disposed of through Anglo-Persian's regular marketing channels.

BUILDING SMALL PLANT

REGINA, Saskatchewan, July 9.—Construction has begun on a small oil refinery here, according to the industrial department of the Canadian National Railways. Capital investment will approximate $40,000.

A. S. T. M. SUGGESTS BROADENING TESTS

The American Society for Testing Materials, sponsor for the project Methods of Testing Petroleum Products and Lubricants (Z11), recently requested a slight broadening of the scope of this project. This action, resulting from a recommendation of the sectional committee, is taken in order to bring the scope into conformity with that of the newly organized committee on Nomenclature and Methods of Test of Petroleum Products of the International Standards Association.

As broadened, the scope of the sectional committee would read as follows, the new section appearing in brackets:

"Methods of test of petroleum and all products derived therefrom, except tests applied to such products used as road or paving materials or for waterproofing; methods of test of lubricants, including all materials used for lubrication when they consist either wholly or in part of petroleum products; [nomenclature of petroleum, petroleum products and lubricants except for materials excluded above]. The scope of this project excludes tests applied to organic chemicals or to products used medicinally."

PROPOSE CANADIAN REFINERY

WAINWRIGHT, Alberta, July 11.—A small refinery is planned to be built in the Wainwright Field by Edmonton interests should these interests be successful in finding oil in the deep sands after completing a test well now drilling. The crude produced in the upper sands is relatively heavy and tentative plans call for a plant that will handle the heavy oil. A process known as the Stillson process is to be used.

LEVI SMITH SUCCUMBS FOLLOWING OPERATION

BALTIMORE, Md., July 11.—Levi Smith of Texon, Tex., president of the Big Lake Oil Co., died Sunday at Johns Hopkins Hospital where he recently underwent an operation for a jaundice condition. He entered the hospital a month ago but his condition did not become serious until July 4.

LEVI SMITH

Two daughters, Mrs. J. B. Chilton and Mrs. I. E. Ranson, both of Texas, were with Mr. Smith when he died. The body was taken to the home of Mr. Smith's mother, Mrs. Elizabeth Smith, at Cameron, W. Va., for funeral services Wednesday afternoon with interment at Moundsville, W. Va. Mr. Smith's wife died several years ago.

Mr. Smith lived in Tulsa from 1912 to 1914, when he was Mid-Continent representative of Benedum & Trees, Inc. He went to Mexico early in 1914 as assistant manager of Penn-Mex Fuel Co., later becoming manager. After two years in Rumania for Benedum & Trees, he came back to head that concern's explorations in Colombia and Venezuela. In 1923 he went to Big Lake, in West Texas, to head the Plymouth Oil Co., a Benedum & Smith property. When the Big Lake Oil Co. was formed he became president and general manager. He was active in the search for oil below the 8,000-foot level at Big Lake.

Mr. Smith's late wife was a sister of Mrs. F. B. Parriott of Tulsa.

Oklahoma Refinery Market Steady With Gasolines Lower

(Continued from Page 21)

slow for this grade. The demand for the low vapor pressure grades was better except in the case of the 11-pound material, for which prices dropped one-fourth cent during the week.

Kerosene and Distillate

The situation in regard to kerosene and all grades of distillates is somewhat mixed. Most buyers and sellers report a strengthening in these products over the week while others state the demand is slow and prices weak.

In Oklahoma, except for the high end-point material, 2½ cents was low for the 41-43 water white grade with spot sales up to 3 cents. Several refiners in Oklahoma and Kansas do not have sufficient kerosene to cover their orders and are behind in their shipments.

The 38-40 distillates are now generally selling at a low of 1⅞ cents in Oklahoma. A week ago sales were made at 1¾ cents. The 32-36 zero under 190 flash furnace oil is scarce at 1¾ cents.

No changes were reported in the quotations for the heavy fuels.

Lubricants

The only change reported in the lubricating oil situation was a better movement from several refineries and compounders. Prices were unchanged. The wax market was quiet with two sales reported at 1.90 cents per pound f.o.b. New Orleans which means a net back at Oklahoma plants of 1⅝ cents per pound.

TANK WAGON CHANGES

(Continued from Page 26)

company reduced kerosene tank wagon price 2 cents at Memphis, Tenn.

Standard Oil Co. of New York, effective July 9, reduced gasoline tank wagon and service station prices 2 cents at Boston, Mass and Providence, R. I.

Magnolia Petroleum Co., effective June 24, reduced gasoline tank wagon price on gasoline 1 cent at Dallas; effective July 6, company reduced gasoline tank wagon price 1 cent at El Paso.

PACIFIC PUBLIC SERVICE

Abandonment of its utility venture by the Standard Oil of California was made known in an announcement of the sale of the Pacific Public Service Co., a subsidiary, to the Pacific Gas & Electric Corp., subject to the approval of the State Railroad Commission. The Pacific Lighting Corp. has received an offer for its 10 per cent interest in the utility, Pacific Gas & Electric planning to take over Pacific Public Service and all its subsidiaries.

EXEMPT ALL ASPHALTS

The House Committee on Ways and Means on July 6 approved for House action the Collier resolution (H. J. Res. 448) declaring that nothing in Section 601(c)(4) of the 1932 Revenue Act shall be construed as imposing a tax upon the importation of natural asphalt and asphalt and bitumen derived from petroleum.

SUCCEED USING COAL MIXED WITH FUEL OIL

NEW YORK, July 11.—Complete satisfaction with the new colloidal fuel, a mixture of 60 per cent oil and 40 per cent pulverized coal, tried out on the Cunard liner Scythia, was expressed by A. W. Perrins, combustion engineer of the company, when the vessel arrived at Liverpool from New York, according to a copyrighted cable to the Herald-Tribune.

"We burned 150 tons on the outward passage in one four-furnaced boiler," he said, "and the average consumption was about 17 tons a day. Everything turned out as expected. There was no after-deposit of ash on the boat deck, and the only ash was that which was extracted from the smoke boxes—an unknown thing in other types of pulverized coal burning systems.

"My general conclusion is that colloidal fuel can be made, handled and burned in the old equipment now used for ordinary fuel oil and that it should be possible to change over to or from ordinary fuel oil burners at a moment's notice. The new fuel can be easily pumped from the bunkers, through the feed pipes to the burners in the furnaces of the boilers.

"We used the same heater and burner pipes as for ordinary fuel oil, with the exception that we slightly modified the diaphragm fitted at the burners in order to give the best results. The cost of the change is practically nothing and it was made in less than a minute."

With regard to the question of the coal settling in the mixture, Mr. Perrins said the tank was absolutely clean after the colloidal fuel was used, as were also the heaters and strainers. The calorific value of the new fuel is only slightly less than the oil fuel, he added, and it burned with a brighter flame.

In discussing the extended marine use of the new fuel Mr. Perrins said: "If you have got a big enough plant your costs are going to be so low that it will be a sound economic proposition. I could erect a plant to supply all shipping companies sailing from the United Kingdom for £250,000. If oil becomes dearer and coal cheaper it should be possible to use 50 per cent proportions of coal and oil."

MAPPING KANSAS

LAWRENCE, Kans., July 11.—Members of the University of Kansas geological Survey are working on a state map showing the distribution of rock formations in the State. Prof. Raymond C. Moore, state geologist, plans to map rock formations in Ellis, Chautauqua and Lyons Counties soon, and later will go to Osage and Crawford Counties. M. K. Elais at present is mapping Permian rocks in Marshall County and will work southward into Riley County to join J. M. Jewett, who is completing a survey there. From this point the men will go to Morris County. This field work will be completed by the end of the year.

EARLY CLOSING IN VANCOUVER

WASHINGTON, D. C., July 8.—All gasoline filling stations in Vancouver, British Columbia, must close no later than 8 o'clock p.m. on week days, according to a recent law of the city council. This action was taken after a petition advocating this plan was signed by about 75 per cent of the gas station operators, states Consul Tewell. The new law is operative from October to March, inclusive. The law does not include Sunday.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	....	$ 55	$ 55	....	$ 65	$ 55	$ 55	$ 65
15-15.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
16-16.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
17-17.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
18-18.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
19-19.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
20-20.9	69	69	71	69	69	69	69	65	....	59	59	....	65	57	59	68
21-21.9	74	74	77	74	74	74	74	66	....	63	63	....	67	60	62	72
22-22.9	79	79	82	78	79	79	79	70	..	69	69	....	70	63	65	77
23-23.9	84	84	88	82	84	84	84	76	....	75	75	....	73	66	68	83
24-24.9	89	89	92	86	89	89	89	81	73	81	81	89	76	69	72	89
25-25.9	93	93	....	91	93	93	93	86	79	87	87	93	80	72	75	....
26-26.9	97	97	....	96	97	....	....	90	84	92	91	97	....	....	....	....
27-27.9	1 00	....	....	....	1 00	....	....	94	89	97	94	1 00	....	....	....	....
28-28.9	1 03	....	....	....	1 02	....	....	98	94	1 02	99	1 03	....	....	....	....
29-29.9	1 06	....	....	....	....	....	....	1 02	98	1 07	1 02	1 06	....	....	....	....
30-30.9	1 09	....	....	....	....	....	....	1 05	1 02	1 12	1 05	1 09	....	....	....	....
31-31.9 ..	....	....	....	....	....	....	....	....	1 06	....	....	1 12	....	....	....	....
32-32.9 ..	....	....	....	....	....	....	....	....	1 10	....	....	1 15	....	....	....	....
33-33.9 ..	....	....	....	....	....	....	....	....	1 14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1 18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1 22	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon, and Olinda, up to 35.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain, and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Dominguez, Santa Fe Springs, McKittrick, Kern River, Midway Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Belridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents;38-38.9 degrees, $1.01; 39 degrees and over, $1.03, Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.19.9 degrees, 65 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22.22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 32-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 22-22.9 degrees, 72 cents; 23-23.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 86 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Domingues.

NEAL ANDERSON QUITS AS CALIFORNIA UMPIRE

LOS ANGELES, Calif., July 9.—Resignation of Neal H. Anderson, California oil umpire, is the most recent development of interest in the campaign for curtailment of California's excessive oversupply of crude oil.

Mr. Anderson's retirement as administrative head of the proration program was followed by a joint meeting of the executive committee for equitable curtailment of the oil industry and the central proration committee in the umpire's office Friday afternoon at which it was agreed that the executive committee would undertake the responsibility of carrying on the curtailment program.

It was urged that operators, especially in the critical fields, should continue in their efforts to restrict their output of oil in an effort to maintain the advantage recently gained through the price increase granted by the principal purchasing companies.

Mr. Anderson declared today that he did not feel it was necessary for him to make a statement at this time other than to urge all oil producers in the State to carry on curtailment as they have in the past and keep their production down to the quotas in the several fields. "Co-operation of every oil producer in the voluntary curtailment program is essential to the health of the industry and I am sure that united efforts to curb overproduction will continue," he predicted.

"The recent price increase is contingent upon the production of every field being held within the limits of the allotment and such certification by the umpire will continue to be the basis of price maintenance. It is therefore imperative that every producer recognize his individual responsibility to contribute his proportion of the state curtailment requirements," he pointed out.

His resignation will not be acted upon until July 13. In the meantime the executive committee will give consideration to the selection of a successor having sufficient experience and ability to carry on the difficult task that Mr. Anderson has so capably performed for the past 2½ years.

WORLD CONFERENCE PROGRESS

NEW YORK, July 11.—The unofficial conferences involving American Dutch, British, Rumanian and Russian oil interests in Paris during the past week made some progress toward agreement on a tentative plan for world co-operation in petroleum production and marketing, according to unofficial advices received here, and the outlook was considered more favorable as the meetings are continued. The Russian delegation has not officially participated in the conference's discussions, it is understood, but conferred at length with the European-American group it met in New York during May and June.

HOWARD-GLASSCOCK GAUGE

BIG SPRING, Tex., July 11.—Representatives of producers in the Howard-Glasscock prorated fields voted, 12 to 2, here Monday to reject the potential gauge of the field recently completed by the State Railroad Commission.

The gauge was taken on recommendation of operators who now declare the potential of 140,000 bbls. daily set up by it represents approximately 40 per cent water.

Commission representatives say the recommendation of operators as incorporated in the commission order for the gauge was not specific as to the manner of taking it. Producers now favor a new gauge on pipe line oil only.

FRENCH IMPORT TAXES

The average import prices for minerals oils in France will be based on prices current in March, 1932, and will be fixed as follows, all taxes save the single tax included: Kerosene, 104.75 francs per hectoliter; "Tourism" gasoline, 118.46 francs per hectoliter; heavy petroleum, 115.55 francs per hectoliter. Crude oils will pay a tax levied on the invoice price.

Late Fields

OKLAHOMA

A new producing horizon was found in the Conservation Pool in Pontotoc County when Fleetborn Oil Co.'s No. 1 Norris, NE cor., Section 28-5-6, flowed 206 bbls. of oil in 13 hours from sand at 2,442 feet. The well was shut in and when opened up later flowed 17 bbls. an hour. This well was dry in the regular producing formations in the pool, which are found at 1,500 and 1,700 feet, and it was drilled deeper.

It was agreed at the meeting of Oklahoma City operators, held Monday, July 11, that the allowable production of the Oklahoma City Field would be 87,350 bbls. for the last 17 days of July. The previous allowable was 97,500 bbls. daily. The allowable is being held to pipe line nominations. The production of the Oklahoma City Field for the first seven days of July averaged 107,797 bbls. per day while the pipe line shipments for the same period averaged only 83,410 bbls. daily. Unless the operators reduce production another overproduction will be built up.

Allocation of the production was made as follows: The 106 "water wells" will be allowed 100 bbls. of oil each for a total of 10,600 bbls.; a flat allowable of 25 bbls. per day to 735 wells, or a total of 18,375 bbls.; wells on a 1.4 per cent basis of the adjusted potential were given a total allowable of 51,875 bbls. per day. Underproduced wells were given an additional allowable totaling 6,500 bbls. per day.

Stanolind Oil & Gas Co.'s No. 1 Penney, SW cor. NW SE, Section 25-19-4, Payne County, found the top of the Wilcox sand at 3,768 feet, where oil rose 2,000 feet in the hole in a short time. It is a wildcat test south of the Ingalls Field. The test topped Viola lime at 3,700 feet.

H. H. Taylor and others' No. 1 Bean, SW cor. NW, Section 36-7-4, in the south extension to the St. Louis Field, found oil in the Viola lime at 4,045-4,101 feet. Oil rose 500 feet in the hole in 10 minutes after drilling the cement plugs.

An employe of the umpire's office testified that the 735 wells above mentioned with a potential of 3,667,269 bbls. a day would be eligible for production during the month of July. Wells in the Silicious lime zone averaged 1,598 bbls. of oil during the month of June. It was estimated that 12 wells would be completed during the last 17 days of July with an estimated daily average of 5,059 bbls.

The demand for crude oil from Oklahoma has declined 23,247 bbls. daily since the last proration period, which was April 1. The demand on April 1 was 441,655 bbls. and on July 1 was 418,408 bbls. The new allowables for the State are to cover the months of July and August. There are no overproduced or overrun areas in the State outside of Oklahoma City, although the stripper operators in the northeastern part of the State are in an unfortunate situation, some of them having no pipe line outlet.

The production in the Oklahoma City Field was extended to the south and west by the completion of Indian Territory Illuminating Oil Co.'s No. 1 Wickline, SW cor. NW, Section 26-11-3w, which made 2,562 bbls. of oil in 5 hours and 15 minutes with 15,000,000 feet of gas a day from the Wilcox sand at 6,543-6,634 feet.

KANSAS

Slick, Pryor & Lockhart and others' No. 1 Orth, SE cor. NE, Section 27-18-10w, a wildcat test in the western part of Rice County, is flowing 75 bbls. of oil an hour from the Silicious lime at 3,236-43 feet. When the crew first drilled into the lime the oil rose 2,700 feet in the hole in 15 hours. The casing was landed on top of the Silicious lime. Then it was lifted and the well started flowing 75 bbls. an hour. This well is 6 miles west of the Shell Petroleum Corp., Carter Oil Co. and others' No. 1 Ploog, in Section 33-18-9w, which is the nearest production.

Slick, Pryor & Lockhart and others' No. 1 Breford, SW cor. NW, Section 7-17-10w, a wildcat test in Ellsworth County, found oil in the Kansas City lime at 3,140-50 feet, where oil rose 800 feet in the hole in one hour. This well is located 6 miles west of the Stratman area in the same county. This is a new producing formation for the central western part of the State, as all other producing wells found oil in the Silicious lime.

Midwest Refining Co.'s No. 7 Scheufler, C SW SE, Section 9-20-11w, a wildcat in Barton County, made 265 bbls. of oil in 10 hours on a swabbing test, from the Silicious lime at 3,304-10 feet. The test is located in the western part of the county and opens a new producing area.

The wildcat test of Vickers' Petroleum Co. and others' No. 1 Claussen, C SE NW, Section 31-15-10w, in the southwestern part of Ellsworth County, was abandoned at a total depth of 3,367 feet.

GULF COAST

HOUSTON, Tex., July 12.—Edwin Jones' No. 1-B Mitchell, deep test on the south side of the Refugio Field, flowed fresh water with a taste of sulphur when tested Sunday. This well, which had given promise of becoming the world's deepest producer, is at a total depth of 9,134 feet (steel line measurement), where 100 feet of screen on a full string of 5⅛-inch casing had been cemented several weeks ago. The hole now is being plugged back 15 feet where a second test will be made. This well has created considerable interest because of the special equipment, including casing, tubing and Christmas Tree, which had to be made to order. The Christmas Tree is the largest ever constructed and has been tested for 7,000 pounds pressure.

CANADA

CHATHAM, Ont., July 11.—The Alberta department of lands and Mines, in connection with pending conservation measures, has advised the Hylo Syndicate of Calgary to shut in its No. 1 well in LSD 12, Section 4-19-2w5, under penalty of forfeiture of the lease. Hylo's No. 1, with wet gas flow of 11,500,000 feet a day, has been blowing practically wide open since it was brought in late in June.

NORTH LOUISIANA

SHREVEPORT, La., July 12.—The southeast (Many) sector of the Zwolle Field was extended 1¼ miles east when Williams & Spiers' No. 1 Williams, Section 31-8-10, came in throwing oil 35 feet over the crown block on a 112-foot derrick at 2,454 feet. The well was choked in to a quarter-inch with 125 pounds back pressure, and is blowing into tanks, flowing an estimated 1,000 bbls. of oil daily. The Standard Oil Co. is laying a gathering line to the well.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., July 12.—C. J. Webster Oil & Gas Co.'s No. 1-A McCrory on drill stem test shot stream of oil over crownblock. It is in a crevice in the chalk, total depth 2,083 feet, and will set casing on top of chalk at 2,001 feet. The well is midway between the Dale and Branyon Pools. Estimated by the force with which it came in, it is guessed at 3,000 to 5,000 bbls. Many crevice wells in the Balcones fault have done that well and better but there is no safe rule for estimating them. The entire block is owned by the Webster Oil & Gas Co. and the new well is in the middle.

MAGNETIC STORM

The Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey reports a moderate magnetic storm starting at 11 a. m. (C.S.T.) July 5 and ending at 8 a. m. (C.S.T.) July 7. The telegrams follow:

"Storm began fifth. Seventeenth. Moderate."

"Storm ended seventh. Fourteen."

H. F. BRINDEL NOW HEADS MID-CONTINENT A. S. M. E.

The Mid-Continent section of the A.S.M.E. announces the selection of officers for the coming year as a result of an election held July 6 in Tulsa. H. F. Brindel, Gypsy Oil Co., Tulsa, is the new chairman, succeeding A. N. Horne, Empire Pipe Line Co., Bartlesville, Okla. The other officers are James F. Fisher, the Empire Companies, Bartlesville, Okla., vice chairman; C. K. Bullen, city water department, Stillwater, Okla., Oklahoma vice chairman; Ralph H. Teed, Citizens Electric Co., Hot Springs, Ark., Arkansas vice chairman; F. Ray McGrew, Standard Pipe Line Co., Shreveport, La., Louisiana vice chairman; H. W. Manley, Barnsdall Oil Co., Tulsa, treasurer; Olaf LaCour Olsen, Worthington Pump Co., Tulsa, secretary, and Harold Adkinson, Mid-Continent petroleum division secretary, Tulsa.

Reports on the activities of the various research committees in this section brought out the facts that work is now being pushed on the viscosity tests being conducted at the University of Oklahoma experimental engineering laboratory. The cost and economic analysis of pipe line pumping stations for main lines, efficiency tests and steam consumption of mud pumps for rotary drilling, unfired pressure vessel code suitable for production field work, and an investigation of oil lifting methods.

A tentative program for general sessions was outlined, which includes: (1) Metallurgical meeting, with special attention devoted to stresses, vibrations, corrosion and material for valves and fittings subjected to higher temperatures and pressures. (2) Pipe line symposium, to immediately follow the metallurgical meeting to be held in October. (3) Production meeting in January. (4) Annual student night meeting in April In addition to these listed meetings there will be a sectional meeting held in either Hot Springs or Little Rock, Ark., the main subject of which as well as all details concerning the time and place will be arranged by Ralph H. Teed, Arkansas vice chairman.

POSTPONE EFFECTIVE DATE REQUIRING SAFETY DOMES

The Interstate Commerce Commission has extended the date on which all tank car domes must be equipped so that the cover may not be removed in transit to October 31. The original order was to have become operative January 1 but its enforcement was finally postponed until July 1 because of requests made by companies that although their cars were being changed as quickly as possible consistent with reasonable cost, many cars remained without the new type of equipment and to have enforced the order would have worked a material hardship on the movement of their goods.

RUMANIAN EXPORTS

NEW YORK, July 11.—Exports of crude oil and refined petroleum products from Rumania during February, according to Rumanian government statistics, aggregated 396,315 tons, against 317,864 tons in the previous month.

Shipments from Rumania during February were sent to the following countries:

Country—	Tons
England	113,334
Egypt	79,582
Italy	57,812
France	46,321
Belgium	10,988
United States	7,664
Jugo-Slavia	6,196
Hungary	5,465
Spain	4,770
Germany	4,629
Austria	3,530
Palestine	3,494
Greece	3,399
Asia	3,243
Africa	2,488
Algeria	2,253
Bulgaria	1,219
Portugal	1,191

The principal products exported during the month were as follows: Gasoline, 128,416 tons; kerosene, 83,935 tons; gas oil, 65,503 tons; fuel oil, 112,605 tons, and lubricating oil, 1,243 tons.

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ECONOMY . . . An efficient all-steel head, amply strong, yet light in weight and easy to handle, furnished at materially reduced prices.

Available in the most commonly used sizes, with one 2-inch outlet furnished as standard. Descriptive literature free on request.

THE NATIONAL SUPPLY COMPANIES

East Coast Markets Strongly Maintained, Undertone Firm

(Continued from Page 23)

and other products into foreign channels, replacing to some extent shipments made from California and the Gulf, prior to the imposition of the American import tariff last month, but quotations are being made only on direct inquiry, and evidently establishment of an open market, "f.o.b. Caribbean refining area," is not contemplated at this time.

Petroleum Exports

Improved export movement of practically all refined products was reported locally during the past week, and foreign demand appeared on the upgrade for the first time in several weeks past.

The following table shows exports of principal refined petroleum products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	July 2	June 25	June 18
Gasoline	220,000	7,000	225,000
Naphtha	385,000	.....	340,000
Kerosene	155,000	4,000	22,000
Fuel and gas oil	44,000	31,000	45,000
Lubricating oil	1,160,000	1,055,000	460,000
Petroleum, refined	1,096,000	70,000	75,000
	Pounds		
Petrolatum	.....	.....	12,000
Paraffin wax	895,000	860,000	975,000
Refined	.....	200,000	360,000
Scale	10,000	13,000	.....
Lubricating grease	560,000	495,000	400,000

Export operators are showing a good deal of attention in the Paris conference on stabilization of export markets, and there is considerable speculation in trade circles as to the probable outcome of the meetings. A revival of the American export association is looked for by some export operators as a logical development, with this body to be made the American participant in any plan which may be developed for rationalization of foreign marketing operations on refined products, although the association, to be fully effective, would have to take in the rank and file of the industry, it is felt.

Imports

As indicated previously, imposition of import taxes on gasoline has resulted in the elimination of import movement of motor fuel, figures for the week ended July 2, the first full week in which the tariff was in effect, showing that only crude and fuel oil came in during the period.

Imports of crude and refined petroleum at the principal United States ports for the week ended July 2 totaled 1,217,000 bbls., a daily average of 173,857 bbls., compared with 2,305,000 bbls., a daily average of 329,286 bbls., for the previous week, a drop of almost 50 per cent. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Boston	87,000
New York	907,000
Philadelphia	181,000
Others	62,000
Total	1,217,000
Daily average	173,857
At Gulf Coast ports	0
At all United States ports:	
Total	1,217,000
Daily average	173,857
Daily average four weeks	298,679

Distribution of the week's imports was as follows:

Crude	964,000
Fuel oil	253,000

Detroit advices indicate that the marketer there who has been handling Rumanian gasoline will continue importing, despite the high tariff impost.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf ports during the week ended July 2 totaled 198,000 bbls., a daily average of 28,286 bbls., compared with 315,000 bbls., or 45,000 bbls. daily, during the previous week, and a daily average of 26,357 bbls. for the four weeks ended July 2.

California receipts were entirely of gasoline during the week, and consisted of 118,000 bbls. at Philadelphia and 80,000 bbls. at New York.

Shutting off of gasoline imports has developed a stronger demand for California gasoline on the East Coast, and a number of cargoes were reported cleared from California ports during the week, as follows:

For New York—112,200 bbls. of gasoline on the tanker Brilliant (Socony-Vacuum boat).

For Tiverton, R. I.—73,600 bbls. of gasoline on the tanker Deroche (Union Oil Co. of California boat).

For Fall River, Mass.—80,000 bbls. of gasoline on the tanker Dilworth.

For Chester, Pa.—115,000 bbls. of gasoline on the Sunoil and 117,000 bbls. of gasoline on the Southern Sun, both Sun Oil Co. tankers.

For Baltimore—116,700 bbls. of gasoline on the Sun, a Sun Oil Co. tanker.

For Sewaren, N. J.—30,000 bbls. of fuel oil and 50,000 bbls. of kerosene on the tanker Meton.

The Oil Man's Calendar

July

18—Colorado Springs, Colo., committee on production practice, American Petroleum Institute.

22—Colorado Springs, Colo., board of directors meeting, American Petroleum Institute, Broadmoor Hotel.

28-29—Los Angeles, Calif., Pacific Coast regional meeting American Institute of Mining & Metallurgical Engineers.

July-August

July 16 to August 28—Atlantic City, N. J., third American Fair, Atlantic City Auditorium.

August

10—Nashville, Tenn., Tennessee Oil Men's Association, Noel Hotel.

22-26—Denver, Colo., American Chemical Society.

23-26—Spokane, Wash., Pacific Coast Gas Association, Hotel Davenport.

30—Cleveland, Ohio, National Air Races.

September

10-17—Cleveland, Ohio, Society of Automotive Engineers.

14-16—Atlantic City, N. J., annual meeting, National Petroleum Association.

15-17—Atlantic City, N. J., American Trade Association Executives.

21-23—Philadelphia, Pa., North American Gasoline Tax Conference.

22-23—Chicago, National Association of Motor Bus Operators.

Last week—Columbus, Ohio, Ohio Petroleum Marketers Association.

30-Oct. 1.—Dallas, Tex., American Institute of Mining & Metallurgical Engineers, petroleum division.

October

3-7—Buffalo, N. Y., National Metal Exposition and National Metal Congress, and American Society for Steel Treating.

3-7—Washington, D. C., National Safety Council.

4-6—Toronto, Canada, Society of Automotive Engineers, transportation meeting.

10-14—Atlantic City, N. J., annual convention, American Gas Association.

11-12—Louisville, Ky., Kentucky Petroleum Marketers Association.

(?) —Chicago, Ill., American Society of Mechanical Engineers (fuel division).

November

10—Los Angeles, Calif., California Natural Gasoline Association.

10-12—Atlanta, Ga., Southeastern Economic Conference.

15-17—Houston, Tex., thirteenth annual meeting, American Petroleum Institute.

(?) —Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

1933

April

20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

Use of Reflux Oil Factor In Cracking Case Against Root

(Continued from Page 30)

hydrocarbons in an enlarged zone where substantial vaporization occurs, in subjecting the vapors to reflux condensation to condense the heavier fractions of the vapors, in passing reflux condensate in an advancing stream through a heating zone where it is subjected to a cracking temperature, in delivering the heated condensate to said enlarged zone, in simultaneously heating an independent stream of charging stock to a cracking temperature while under a superatmospheric pressure, in introducing said heated charging stock to said enlarged zone in which zone the charging stock and heated condensate physically commingle, and in maintaining the stream of reflux condensate while being heated under a superatmospheric pressure exceeding the pressure maintained on the stream of charging stock."

Battery of Attorneys

Universal is represented in the trial by former U. S. Circuit Judge T. G. Haight of Jersey City, F. L. Belknap of Chicago, William F. Hall and Charles M. Thomas of Washington, and former U. S. District Judge Hugh M. Morris of Delaware. The Root company is represented by former U. S. Circuit Judge Arthur C. Denison of Cleveland, J. Bernhard Thiess of Chicago, Robert Lewis Ames, a member of the firm of Jones, Addington, Ames & Seibold of Chicago and the firm of Marvel Morford and Ward of Wilmington. Dr. Warren K. Lewis, professor of chemical engineering at Massachusetts Institute of Technology, was the first witness called by the plaintiff. He gave a brief outline of the chemistry of hydrocarbons and described refining processes, especially cracking.

H. J. Halle, president of Universal, described the early days in the development of the Dubbs cracking process, the discovery and development by C. P. Dubbs of the clean recirculation principle, and its increasing importance. The Standard of California and the Shell companies were for years the largest licensees of the Dubbs process, paying millions in royalties. R. W. Hanna, vice president of the Standard of California, and Daniel Pyzel, chief technologist of the Shell companies in the United States, testified that their companies had paid royalties because in their judgment clean circulation was vital to economical operation of the cracking process and they wished to obtain rights under the clean circulation patent in suit.

Government Report Shows Growth of Motor Fuel Lines

(Continued from Page 30)

natural gasoline in various fields in the United States have been pumping this product through short lines directly into crude oil transportation systems or through specially designed systems to refineries or convenient points along the railroads where the gasoline is loaded into tank cars. These lines have been greatly lengthened until one such system is over 100 miles long.

The first relatively long line for transporting natural gasoline was constructed in Orange County, California, in 1912. This line was 2 inches in diameter and 2 miles long. In 1915, the Peoples Natural Gas Co. of Pittsburgh, Pa., completed a 2-inch line 23 miles long. This was used to transport natural gasoline through the company's natural gasoline plant at Brave, Green County Pennsylvania, to the Pennsylvania Railroad at Marianna, Washington County.

As of April 1, 1929, it was estimated that the daily production of natural gasoline in California was 2,200,000 gallons and that 81 per cent of this amount was shipped from the plants by pipe line.

Although no actual figures are available, there can be no doubt that transportation of motor gasoline by pipe line will show a material saving when compared with railway tank car shipments under present freight tariffs. Further details of this transportation study, including estimates showing the cost of transporting gasoline by pipe line and a map of a portion of the United States upon which existing pipe lines are shown, are given in Bureau of Mines Technical Paper 517, "Transportation of Gasoline by Pipe Line," by C. P. Bowie. Technical Paper 517 may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., price 10 cents.

WORTHINGTON VETERAN DEAD

James Barrett, 66, of 622 Fifty-ninth Street, Brooklyn, N. J., died June 22 in the Columbia Presbyterian Medical Center after a short illness. He was a member of the sales staff of the Worthington Pump & Machinery Corp. and a veteran employe of that organization, having served it in various capacities for 40 years.

NEW DISTRIBUTING PLANT

CHATHAM, Ontario, July 9.—Work started this week on the construction of the first 1,200,000-gallon unit of a new 5,000,000-gallon storage plant for Shell Oil Co. of Canada at Port Stanley, Ontario. The unit is to be completed this month in time to take delivery of petroleum products from tankers early in August.

NORWAY INCREASES TAX

NEW YORK, July 11.—Effective July 1, the Norwegian government has increased its internal tax on domestic and imported gasoline from 0.03 crown to 0.08 crown per liter. Internal taxes on automobile tires, tubes and tube protectors were also increased on the same date.

Motor Buses Account for 3 Per Cent of U. S. Gasoline Consumption

(Continued from Page 27)

GASOLINE CONSUMED IN THE UNITED STATES BY REVENUE BUSES
(Thousand gallons)

	1930			1931		
Month—	City buses	Intercity buses	Total	City buses	Intercity buses	Total
January	12,881.2	23,770.4	36,651.6	13,277.5	27,257.4	40,534.9
February	11,516.1	22,023.5	33,539.6	12,076.0	23,961.4	36,037.4
March	12,242.3	23,676.8	35,919.1	13,323.1	26,235.6	39,558.7
April	12,285.8	23,583.3	35,869.1	13,064.6	26,268.6	39,333.2
May	12,518.2	24,924.6	37,442.8	13,338.3	27,850.6	41,188.9
June	12,068.0	28,168.9	40,236.9	12,897.3	28,410.9	41,308.2
July	11,792.1	29,510.3	41,302.4	12,653.8	30,454.4	43,108.2
August	11,574.2	30,321.3	41,895.5	12,060.8	30,619.2	42,680.0
September	11,458.1	27,233.1	38,691.2	11,893.5	27,718.8	39,612.3
October	12,271.3	26,952.3	39,223.6	12,623.5	27,257.4	39,880.9
November	11,806.6	25,517.3	37,323.9	12,030.4	26,301.5	38,331.9
December	12,808.6	26,266.0	39,074.6	12,851.7	27,257.4	40,109.1
Total	145,222.5	311,947.8	457,170.3	152,090.5	329,593.2	481,683.7

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Asphalt Production Problems Are Clarified by Research and Experience in the Field

By C. M. BASKIN
Asphalt Technologist, Imperial Oil Refineries, Ltd.

THE purpose of this paper is not so much to present a series of data and figures, but rather to select some of the outstanding features of information already at hand that may tend to give a more sound conception of asphalt, and form a basis for further systematic work. On the whole, we have available considerable analytical work on native and manufactured asphalts, as well as the various uses to which these products are put. We lack, however, first, classification of these data, and arrangement of results in logical sequence. Second, and mainly, there is a complete absence of any thorough consideration of the value and soundness of current or popular terms used in connection with asphalt, significance of tests, and relative importance of method employed.

Quite frequently our immediate concern with the finished product obscures the importance of its component parts. In this regard, our asphalt paving profession was largely handicapped by investigations assuming an isolated form; the man working on paving mixtures, very often, was not clear as to type of asphalt he was using and did not have at hand means whereby he could thoroughly describe the bituminous material for future identification, and comparison.

In the refinery it was a common occurrence, where the producer of asphalt did not sufficiently appreciate the significance of change in process, and its effect on asphalt produced, or still more on the finished paving mixture. The recognition, on the part of the refiner, of significance and possibilities of process technique, aided by chemical research and data obtained in the field, is gradually clarifying the situation to a point where we can talk of asphalt in more tangible terms.

Asphalt a Mixture

Asphalt is a mixture of hydrocarbons the same as crude petroleum, which at present constitutes its principal source. The general field of hydrocarbons has been subdivided into saturated and unsaturated groups or series. The saturated hydrocarbons are characterized as those compounds in which the single carbon valence has been completely taken up either by hydrogen or other radicals. The saturated hydrocarbons are prominent by their resistance to reagents such as alkalies and acids, and the difficulty with which they form substitution compounds. The paraffin series is considered representative of the saturated hydrocarbons.

The unsaturated hydrocarbons have the characteristic property of forming additive compounds. It is this additive property which gave rise to the term "unsaturated." Hydrocarbons and other organic substances principally composed of carbon and hydrogen are almost infinite in number and it is beyond the scope of this paper to go into the intricacies of this field. It is important, however, to observe the following general features, carbon and hydrogen being the principal elements that go into the make-up of this field of substances; the difference between one compound and another is first, the ratio or quantity of carbon to hydrogen, second the form of the carbon hydrogen combination. Difference of combination in regard to proportion of carbon to hydrogen and form of linkage is what principally accounts for the difference between one organic substance and another. It accounts for the difference between gasoline and paraffin wax, asphalt and naphthalene, petroleum naphtha and benzol, even though all of these are completely or principally made up of carbon and hydrogen.

Thus, besides, the wide distinction based on saturation of carbon valence, in the compound, the whole field of organic substances has a number of much clearer subdivisions, that of groups or classes. These closer and more definite subdivisions are based mainly on proportion of combination; for instance, the carbon hydrogen combination in paraffins are always in accordance with the numerical formula of $C_nH_{2n}+2$. For example, methane gas CH_4 or the solid paraffin pentatrioctane $C_{35}H_{72}$, the numerical proportion of $C_nH_{2n}+2$ is still maintained. We may then have such groups as the olefines with the numerical formula C_nH_{2n}, the acetylenes C_nH_{2n-2}.

The main point of interest is, that any given group, while it may be a mixture of different molecular weight compounds, all have certain properties in common with one another. Paraffins may vary in quantitative combinations of carbon and hydrogen, specific gravity, boiling points, etc., yet, they are similar in such properties as lack of stickiness, color, and reaction and combination with certain reagents.

Vegetable oils form a group by themselves in so far as they are combinations of fatty acids and glycerin, and while these may vary in molecular weight all along the line, they have a distinct similarity to one another, such as appearance, consistency and reactions. Fatty acids will react with alkalies, whereas the paraffins are scarcely affected by this reagent.

We cannot speak in any definite manner regarding the chemical composition of asphalt. So far, we are only certain that asphalt is a mixture of several groups. A brief summary of the different classes of compounds present in asphalt and their chemical and physical properties according to Prof. J. Marcuson is as follows:

1. Oily constituents: These appear as a viscous oil usually fluorescent, and have a specific gravity lower than "1." They are hydrocarbons and generally contain small percentages of sulphur and oxygen.

2. Asphaltic resins: Are an intermediate product of transformation of oily constituents into asphaltenes. They are solid with a softening point below 200° F. Their color varies from reddish brown to dark brown. They are soluble in precipitation naphtha, but unlike the heavy oils only partially soluble in acetone. When absorbed by clay, they become insoluble in paraffin naphtha.

3. Asphaltenes: Formed from asphaltic resins by further action of sulphur or oxygen under the influence of heat. They appear as a dark to black powder. On heating, asphaltenes do not melt, but swell. Their specific gravity is higher than "1."

Asphaltic resins and asphaltenes form addition products with sulphuric acid. They react chemically with a number of reagents, resulting in compounds whose physical and chemical properties indicate that asphaltenes and asphaltic resins are not acids, esters or lactones; they do not contain alcoholic or phenolic hydroxy groups nor oxy-compounds. Therefore, they seem to be more or less saturated polycyclic compounds containing sulphur or oxygen in the form of bridge linkage.

4. Carbenes and carboids present in petroleum asphalt only in minute quantities, and are probably further condensation or polymerization products of asphaltenes.

5. Asphaltic acids and anhydrides rarely present in petroleum asphalt in appreciable quantities, in contrast to certain natural asphalts which contain these groups in large quantities up to 12 per cent. The asphaltic acids are of a brown black color, and form a tar-like or resinous mass. When heated, they are converted into unsaponifiable substances.

The whole subject of asphalt, therefore, resolves itself into a study of, first, the characteristics of the above enumerated constituent groups, and second, the effect of varying the proportions of these groups on the properties of the resulting product. Asphalt is in no sense a distinct group by itself, but rather a portion of crude petroleum containing several groups in form of a mixture or mutual solution. The character and make-up of each group to start with depend to a great extent on source. For any given consistency, the oily constituents in a California residue are different in physical and chemical properties from those extracted from the same consistency Panuco residual. This likewise, undoubtedly, holds true of the resins and the asphaltenes. Recent work shows that the matter of mutual solubility plays an important part in regard to homogeneity and stability of the asphalt. Panuco asphaltenes are soluble in their corresponding oily constituents up to a certain point in concentration. The presence of the resins increases or rather insures thorough solubility of the various groups. The resins, therefore, may be considered as an intermediary, since the asphaltenes are thoroughly soluble in the resins and the resins in turn are completely soluble in the oily constituents.

Also considering residues from different crude petroleums obtained by direct temperature reduction or distillation to a given point in consistency, we find that the oily constituents in one may have an entirely different viscosity and solvent power than oily constituents in another. In speaking of solvent power we mean capacity to take up asphaltenes in solution. The resins, as you will note, are nearly all completely soluble in paraffin distillates. Thus, differences in properties of the individual constituent groups and variation of quantitative ratio of the different groups, is what accounts for the difference of 100° F. S.P. straight reduced residual from California crude and 100° F. S.P. similarly reduced residual from other crudes.

Subdivision of Petroleum Into Asphalt and Paraffin Base a Fallacy

As a rule crude petroleum is spoken of as asphaltic or paraffin base. This is completely off the mark. In the first place, the very term "base" is rather loose and relative, if it has any meaning at all. If we consider distilling a crude to a certain consistency residue as reducing to base, we then can readily see that this residue will vary in content of oily constituents, resins and asphaltenes over a wide range, depending on source. Practically all crude residues contain some asphalt, and all asphaltic residues contain varying portions of saturated hydrocarbons. Consequently, we could not say with any degree of certainty, that the 100 S.P. residue from one crude is a purer asphalt than the same S.P. residue from another crude. Moreover, it is to be borne in mind that the oily constituents are by no means paraffins, nor do they necessarily contain any portion of paraffin. A thoroughly stripped asphalt from Mid-Continent crude may not have any more paraffin than a similar asphalt from Panuco. Furthermore, the presence of paraffins in an asphalt can be considered as a distinct advantage, provided these are in thorough solution or suspension with or within all the other groups. As already pointed out, the paraffins are the most stable of the hydrocarbon groups, so far investigated.

A consideration of the relative quantities of a given consistency asphalt in different crudes will further illustrate the looseness of classification in accordance with base. Taking for instance 100° F. S.P. asphalt as the starting point, we have approximately the following variation in yield on crude:

TABLE NO. 2.

Type of crude—	(1) °Be.	(2) %
Oklahoma City	42	2
Peruvian	36	4
Illinois (Mid-Continent)	32	5 5
Seminole	36	3 5
Texas	24	14
Light California	26	12
Heavy California	12	65
Mexican (Panuco)	12	65

(1) Gravity A.P.I. (2) Processing to 100° F. S.P. asphalt by steam or vacuum reduction.

We can therefore speak of crude as being either predominantly asphaltic, such

TABLE NO. 1

Source of asphalt	S.P. R.&B. °F.	Asphaltenes %	Residues: Resins %	Residues: Oily constituents %	Penetration 100 grs. @ 77°F.	Penetration 5 sec. @ 160°F.	Susceptibility factor	Ductility @ 77° F. 5 cms/minute
Panuco	85	13.65	26.64	59.20	T.S.	T.S.	....	T.S.
Panuco	108	16 40	30.77	52.83	160	T.S.	....	110+
Colombian	107½	6.90	20.40	72.60	180	T.S.	....	110+
Illinois	102	5.24	35 12	59 49	235	T.S.	....	110+
Californian	81	4.04	34 41	60.71	T.S.	T.S.	....	T.S.
Quire Quire	102½	3 19	23 85	70 65	190	T.S.	....	110+
C. C. tar	105	14 42	9.32	76.15	150	T.S.	....	110+
High pressure	....	.....	.....	.....	...	...	....	....
C. C. tar	103	11 56	13.92	74 52	183	T.S.	....	110+
Low pressure	....	.....	.....	.....	...	...	....	....
Oxidised Asphalts								
Panuco	155	30 25	27.30	41 83	42	91	2 17	10
Panuco	148	26.84	28.26	44 88	40	100	2 5	14
Colombian	144.5	16 38	29.93	53 69	40	94	2 37	12
Illinois	147.5	13.66	36 76	49 58	39	92	2 36	14
Californian	135	18.32	28 30	52 80	30	93	3 1	27
Quire Quire	144	19.16	28.54	52 30	21	70	3 48	31
C. C. tar	148	36 9'	4.45	68 53	16	47	2.94	40
High pressure	....	.....	.....	.....	..	..	....	..
C. C. tar	148	22 75	8.24	69 01	22½	63	2.8	25
Low pressure	....	.....	.....	.....	..	..	....	..

as heavy California, or partially asphaltic and predominantly paraffin, such as Seminole. If the term base is to be applied to the remnant of crude of a certain consistency obtained by temperature distillation, it is evident that this remnant in the above enumerated crudes and many others not included in our classification, is asphalt or asphaltic, certainly not paraffin. The careless handling of the term "base" therefore resulted in a good deal of confusion, in fact, we very often find that asphaltic residuals were condemned to start with for no other reason than it came from a crude petroleum predominantly paraffin in its makeup, but yet contained a residue that was fully as asphaltic as those generally accepted. What most people, speaking in terms of "base" overlook is, that the oily constituents, resins and asphaltenes that make up the total asphaltic residue are of such high boiling points that the paraffin portions are completely removed before we come to this so-called base.

Further examination of Table No. 1 will show that there is no reason to think a given S.P. residue of one crude as being more asphaltic than another. If, for instance, we base ourselves on asphaltic content we can readily alter this by oxidation. An Illinois 102° F. S.P. residual contains only 5.24 per cent asphaltenes as compared to a Panuco 102° F. S.P. with a possible 14.5 per cent asphaltene content. By reducing the Illinois crude to 70° F. S.P. and oxidizing this residue to 102° F. S.P. we can raise the asphalt content up to 12 per cent, thus bringing it more in line with Panuco.

The outstanding fact, therefore is that asphaltene content, or the relative quantity of any of the constituents in a solid or semisolid bitumen, does not indicate that the total residue is more or less asphaltic. Heavy California is generally considered a more asphaltic crude than Panuco, contains less paraffin, yet an 81° F. S.P. California residue shows only 4.04 per cent asphaltenes against approximately 13 per cent in a similar consistency Mexican crude residue.

Neither can we fix upon asphaltic content as an indication of quality. The 147.5° F. S.P. oxidized Illinois has a lower susceptibility factor and as good a ductility as the same softening point oxidized Mexican even though the Illinois product contains half the amount of asphaltenes as the equivalent softening point Mexican product. Numerous other tests and even observations of long-time service prove the inadequacy of this asphaltic and paraffin base classification.

Natural Asphalts Variation in State, Composition and Properties

When we come to compare natural asphalts from various sources, we find that their basic differences in physical and chemical properties and composition is far greater than anything encountered in crude petroleum residues. An attempt at any direct classification of native asphalts is complicated, first, by the fact that no two of them are alike in consistency; second, that all indications are that the causes which influenced the formation of native bitumens differed almost in every case. Some were reduced by slow evaporation of lower boiling point fractions. Others show signs of conversions by heat and pressure, and in other cases it must have been slow oxidation, or possibly a combination of all three. In comparing crude petroleums, we can invariably reduce these to a common consistency, whether this be S.P., viscosity or identical penetration at some given temperature.

We thus have some sort of a starting point. This is quite impossible with natural asphalts, most of which are found either reduced or converted to points in consistency beyond which we could make no further change. Natural asphalts vary from heavy liquids to high S.P. solid. The tar sand deposits covering an immense area in the Canadian Northwest contain a bitumen almost liquid at ordinary temperature. Generally the extracted tar from these deposits bear a marked similarity to heavy Mexican crude. The native bitumen in the tar sands seem to have undergone little change other than possible loss of volatile fractions.

Natural asphalts like gilsonite or grahamite, on the other hand, seem to be products of actual reaction, and conversion, much more than products of reduction by temperature evaporation. It is quite impossible to obtain by direct distillation of crude petroleum, solid residues of a composition or properties the same as gilsonite or the current run grahamite. In some cases and by special means, we could perhaps duplicate gilsonite by direct distillation, as far as S.P. is concerned, but the petroleum pitch would not nearly approach the percentage of asphaltenes usually found in equivalent S.P. native bitumens. Asphaltenes, resins and asphaltic acids can be regarded as products of reaction and conversion, and the presence of quantities of such groups not met with in direct distilled petroleum residues is ample proof of the native bitumen having undergone chemical and structural changes, rather than mere elimination by temperature distillation. Invariably we find that the difference between one native solid bitumen and another is mainly a degree of transformation. Grahamite, for instance, differs from gilsonite principally in carbene content, and carbenes are condensation products of asphaltenes.

Without going into the complicated field of chemical structure, I wish to emphasize this particular point, that natural asphalts vary in fully the same degree as residuals from crude petroleums. The soluble portion of Trinidad asphalt has a molecular weight of 1,131.8, an S. P. of 140° F., a saponification value of 39, asphaltene content about 38 per cent and carbenes from a trace to 3 per cent. Gilsonite, molecular weight 4.251.5[1], S. Points 300° F., saponifiable matter trace, asphaltene content 60 to 80 per cent; carbenes, trace; grahamite, S.P. 350 to 625° F., asphaltenes vary from 1 to 50 per cent; carbene variation from 0 to 80 per cent; extracted bitumen from Alberta tar sands, S. Point range, 40 to 70° F.; asphaltene content, 8 to 12 per cent; asphaltic acids, trace.

Value of Raw Material Is in Proportion to Further Processing

Thus, the main difficulty with native asphalts is that, in most cases, conversion or transformation has gone to a point to nullify its possibilities as a raw material for further processing, thereby restricting its use. This statement is based on the fact that the manufacturer of asphalt is more than a mere distilling or elimination process, but is based largely on chemical reactions and changes that could be effected in the actual composition and structure of the raw materials. Intrinsically, we must consider all bitumens to start with, as raw materials, native asphalt or crude petroleum, in fact the term crude attached to petroleum amply indicates it as a raw material for further processing.

The utility or value of a raw material, therefore, is in direct proportion to the scope of refining applicable to it. Our outline of the different groups in asphalt shows how the oily constituents are converted into asphaltic resins, the resins into asphaltenes, etc. If a raw material contains little or no oily constituents, the scope of conversion is limited, which automatically limits the number of products obtainable from that particular source.

A practical example of this would be gilsonite or grahamite. It is evident that these two could not be submitted to further processing, some types of grahamite being practically the ultimate point of conversion.

We can, therefore, say that the "importance and value of source is only in how far the raw material can be further converted over a wide range. The adaptability of a raw material from any given source to further processing, is what determines its future value."

[1]Molecular weights given are questionable, we are certain, however, that there is a great variation. When speaking of molecular weights, it is understood to be the mean molecular weight of a mixture of asphaltenes. Corrected values will appear in future publications.

Manufacture of Asphalt, Modern Methods of Reduction and Conversion

The basis of refining of crude petroleum is elimination and fractionation, elimination of certain portions and the segregation of others. Since most hydrocarbons are volatile, distillation is the initial step in refining, and resolves itself into segregation of products in accordance with their respective ranges of boiling points. For instance, the gasoline fraction is an aggregate of hydrocarbons with boiling points ranging all the way from 100 to 430° F. The portion known as refined oil or kerosene varies in boiling point from 330 to 525° F. It is important to observe that while the first fraction has a final boiling point of 420° F. the next portion still contains hydrocarbons boiling at 320° F. which proves the difficulty of making sharp separations.

Fractionation of crude petroleum is complicated mainly by reason of its being such a bewildering mixture of different compounds with no appreciable gap between the boiling of one and that of the next. It is the closeness of one to the other that makes sharp separation well nigh impossible. Had petroleum been a mixture of substances like alcohol, water, glycerin, etc., refining would be a comparatively simple matter. Alcohol boils at 161.1° F., water at 212° F., glycerin at 554° F., a mixture of such products can be readily separated.

Refinery technique, therefore, in the past few years, concentrated on design of apparatus to give clearer and sharper subdivisions of products and narrow the boiling point ranges. Originally closer fractionation was accomplished by a number of redistillations. The recent devices such as the bubble tower is in reality a series of redistillations combined in one apparatus, particularly taking advantage of a device whereby the vapors are bubbled through a number of layers of liquid, each layer being maintained at different temperatures.

Difficulty Using Old Cylindrical Still

The shell or cylindrical still was the basic method of fractionation, just as the old kettle on three stones was the original means of boiling water. Temperature differential control being the first requisite in thorough fractionation, the difficulty with a shell still is self-evident: First, in a still, the crude oil is subjected to heat, or is kept at a high temperature for a long time, and as pointed out above, time and temperature will cause basic changes in hydrocarbons. Second, the impossibility of so controlling temperature differential between the liquid and vapor space in the still as to prevent partial condensation of the high boiling point vaporized hydrocarbons, and the dropping or run back of recondensed material into the liquid residue.

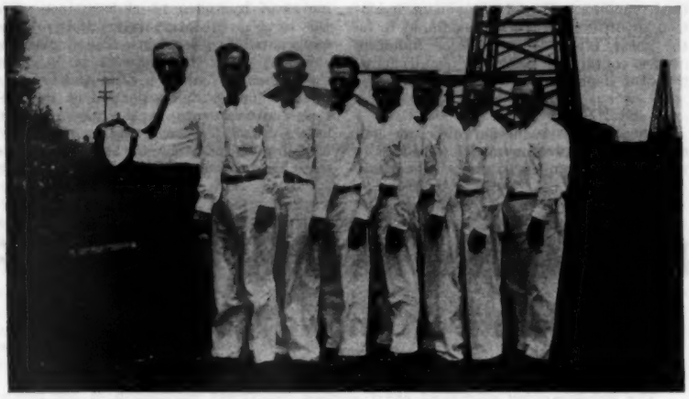
These difficulties with the shell still will readily explain the trouble experienced in producing asphaltic residues from such crudes as Panuco or heavy California. First, Panuco and heavy California were partially reduced by natural means to start with. To distill Panuco to 100° F. S.P. requires the vaporization and removal of only about 30 to 35 per cent of the crude. Reduction of the average Mid-Continent to the same consistency asphaltic base requires the vaporization and removal of nearly 95 per cent of the crude. Second, and mainly, that the portion of Panuco to be distilled off

Empire Companies Make Remarkable Record in Accident Prevention

The oil production division of the Empire Companies, according to statistics released by the American Petroleum Institute, had the lowest lost time accident frequency in 1931 of any producing company work 2,500,000 hours or more annually. Company figures show a reduction in lost time frequency from 45, recorded two and one-half years ago, to 9.8 for the first six months of 1932, an improvement of 80 per cent. Another achievement of this group and one of the reasons for its low frequency is the fact that every employe is trained in the principles of first aid and holds a certificate from the U. S. Bureau of Mines. This is one of the few major producing organizations in the Mid-Continent area if not the only one, with a 100 per cent certificate now in force.

The interest of employes in accident prevention work was recently evidenced when 17 teams from the Kansas division met in their annual first aid contest at Oil Hill. Prizes for the 1932 meet were a silver plaque, donated by M. R. Shaffer, general superintendent, and first aid kits and driving goggles given by safety supply houses. More than 1,000 employes and spectators were in attendance. A. U. Miller, U. S. Bureau of Mines, Vincennes, Ind.; E. F. Coulter, Hartford Accident & Indemnity Co., of Kansas City, Mo., and C. S. Warren, production superintendent of the Kansas division, spoke, as did C. E. Beecher, production engineer from Bartlesville, who presented the prizes.

The accident prevention program of this organization is reported to have created higher morale and improved operative practice by arousing the interest of employes in their jobs.



Edward C. Rutherford, foreman; Bernard E. Mass, team patient; Floyd M. Leap, team captain; William M. Richey, "2" man; Ira R. Allen, "1" man; Howard F. Lyons, "3" man; Cecil M. Wilcox, "4" man; Harold W. Arnold, team judge

has a far lower boiling point range than the 95 per cent of vaporized overhead in Mid-Continent. Consequently, in reducing a Mid-Continent to asphalt of required consistency residue, the still temperatures are far higher than when reducing Panuco or California to the same S.P. residue as well as a correspondingly longer time factor.

The development of the pipe still completely changed the situation in regard to reduction or obtaining thoroughly stripped asphaltic residues in the same manner as the bubble tower radically affected general fractionation. The crude is forced through a long coil and is brought up at the outlet to a temperature point at which the overhead fractions are completely vaporized. The crude is released into a separator drum where the vaporized portion is instantaneously removed by vacuum and steam spray with no possibility of recondensation or run back. The flow of crude through the coil is continuous, and the stripped residue is constantly drained off the bottom of the separator, as formed.

Asphalt is a well balanced solution or colloidal state and its stability is dependent on the compounds of one group being thoroughly dissolved or diffused in the other group. Vaporizing a certain portion of the oily constituents and then running these back into the asphaltic residue very often upsets the required balance. It is not the relative presence or absence of saturated and paraffinic compounds that affect the quality of the asphaltic residue for further processing, in fact the saturated hydrocarbons are the most stable portion of the asphalt. The difficulty is, first, with vaporizing some of the oily constituents, recondensing and running these back into the residue at such high temperatures. Second, maintaining the bitumen for a long time at excessive temperatures. The pipe still, therefore, removes the possibility of recondensation, and run back as well as reduces the time element. An asphaltic residue in a cylindrical still may remain at extreme temperature from 12 to 24 hours, depending on product reduced to. In a pipe still the residue is at a maximum temperature for only a fraction of a minute.

Steam Reducing, a Phase of Asphalt Refining That Outlived Its Utility

Fundamental development of any kind in the petroleum industry is of quite recent date. In this regard our industry could not be compared to smelting of ores or even carbonization of coal and processing of the tar for numerous products. First production of asphalt centered itself on the mining of native bitumens and doctoring these up to workable consistency by the addition of liquid petroleum residues, coal tars or any high boiling point oil that was handy. The appearance of heavy California and Mexican simplified the matter as it was a self-evident step to reduce these crudes to required consistency for paving work. Asphalt refining, by processing heavy crude petroleums, therefore centered on the so-called "steam reducing process." The crude (Mexican or California) was charged into a shell still to some reasonable level, brought up slowly in temperature, the moisture eliminated and when the crude oil attained a sufficiently high temperature point (350 to 400° F.) live steam was sprayed in through a series of perforated pipes laid on the bottom of the still. The bottom steam served several purposes. It facilitated carrying off the vaporized portions, depressed considerably the boiling points and prevented local overheating and coking. Reduction of different crudes for paving purposes, consisted in gradual running and testing for S.P. penetration or viscosity at some specified temperature. This process was and still is known as "steam reducing."

The pipe still, or as it is very often referred to, the vacuum coil, has rapidly superseded steam reducing in shell stills to a point where it is found to be more economical to process even the high asphaltic content crudes, such as Panuco and heavy California in such apparatus. Continuous stripping in a vacuum flash coil improves considerably even Mexican, and there is good reason to believe that this crude (Mexican) is very often reduced to a common consistency residue and then oxidized for different paving grades. Some samples of Mexican paving asphalt from commercial lots, taken in the past two years, showed susceptibility factors considerably lower than what has been commonly obtained by straight steam reducing in a shell still. Notwithstanding this it is surprising to find that steam reducing is still spoken of in certain quarters, with a degree of deference that would indicate an implanted belief that for some unaccountable reason "steam reducing" denotes the acme of quality.

Reduction to a given S.P. residue in a flash vacuum coil and subsequent oxidation to different grades, was found to be the most effective method of handling crudes containing relatively small quantities of asphalt.

Oxidation of Asphalt

So much for reduction of crude petroleum to required asphaltic residue. It was found at an early stage of asphalt development that straight reduction was applicable only to a limited degree in the manufacture of binders and fluxes. When products were required of high S. P., low susceptibility to temperature change, and high degree of resistance to deterioration by the elements, recourse had to be taken to processes that would actually influence or change the numerical ratio of the constituents by converting part of one into the other. These processes are commonly known as oxidation. I say processes, simply, that while the reactions involved are the same, the means of conversion or reagents used may be quite different. Air is by far the cheapest and most common reagent and the action is mainly the removal of hydrogen which combines with the oxygen to form water and volatile oxygenated hydrocarbons. The immediate chemical effect therefore is to increase the carbon to hydrogen ratio and to completely change the proportion of the different constituents in the asphalt. For any given S.P. penetration or any other measure of consistency, the oxidized asphalt contains more asphaltenes and less oily constituents than the corresponding products obtained by direct distillation.

Here again the importance of source becomes apparent only when considering degree and possibility of conversion by means of oxidation. You will note that a crude like Quire Quire (Venezuelan) or California has only limited scope when products are required of high S.P. and high penetration. The asphaltene content to start with is not any way near as important as the presence of large portions of resins and oily constituents, particularly, the chemical and physical properties of the oil constituents and their rate of reaction with sulphur or oxygen. To date we find that the crudes naturally containing low quantities of asphaltic residues such as Mid-Continent, are capable of being converted into a larger variety of products than crudes like Quire Quire, Californian or even Mexican, this mainly from the standpoint of obtaining a variety of products having low susceptibility ratios, which feature we shall discuss later as being one of the most important considerations in production of dense pavements and roofing coating.

Besides direct oxidation there are indirect processes that may influence vastly properties of the final product, such as the oxidation of a California crude to an extremely high S.P. and then fluxing back with either reduced crude of liquid consistency or with any part of the most suitable overhead oils. By this method we may obtain products that line up quite favorably in regard to physical and chemical characteristics with asphalts from other sources.

Bearing in mind, therefore, that we have at hand means whereby we can affect basic changes in a crude petroleum residue, the source of the crude becomes of relatively minor importance, with a few possible exceptions, due to lack of data, "given a crude that is comparatively liquid at ordinary temperatures, we can always produce satisfactory paving and roofing asphalts from it by balancing direct reduction to oxidation." The whole matter resolves itself merely into a consideration of relative economics of processing. Any bitumen, however, already found in a highly reduced or converted state such as gilsonite or grahamite presents a case where nature has overstepped the bounds of human utility, it has done too thorough a job to suit our needs. Natural conversion could be best compared to oxidation of a crude residue in a still where conversion is allowed to go on without further control. The mass will rise in temperature and the higher the temperature the more rapidly will it oxidize. Had natural conversion ceased in gilsonite at the same point as in some of the Mesopotamian deposits we might have been able to further convert it by controlled means to suit our purpose.

High Pressure and High Temperature Conversion Process

Recent years saw the development of a process which indirectly has considerable bearing on the paving industry, high temperature and pressure conversion apparatus commonly known as "cracking processes." These processes are based on the fact that high boiling point high molecular weight hydrocarbons will dissociate into two or more molecules of different boiling point and molecular weights. The dissociated mixture can then be redistilled to recover the low boiling point fractions as gasoline and the high boiling point portion as a tarry residue. Under the influence of heat (dissociation temperatures) and pressure, the reaction is progressive, that is, any given molecular weight compound may subdivide itself into two molecules and these in turn go on dissociating into further compounds if allowed to remain sufficiently long at a high temperature and pressure. This process if uncontrolled may finally give carbon and hydrogen or as is commonly the case in the production of gas from any suitable bituminous product carbon and gaseous hydrocarbons.

Here also, control is of prime importance, temperature, time and pressure therefore must be kept within predeter-

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Design Chart to Calculate Flashpoint of Lubricants of Known Components

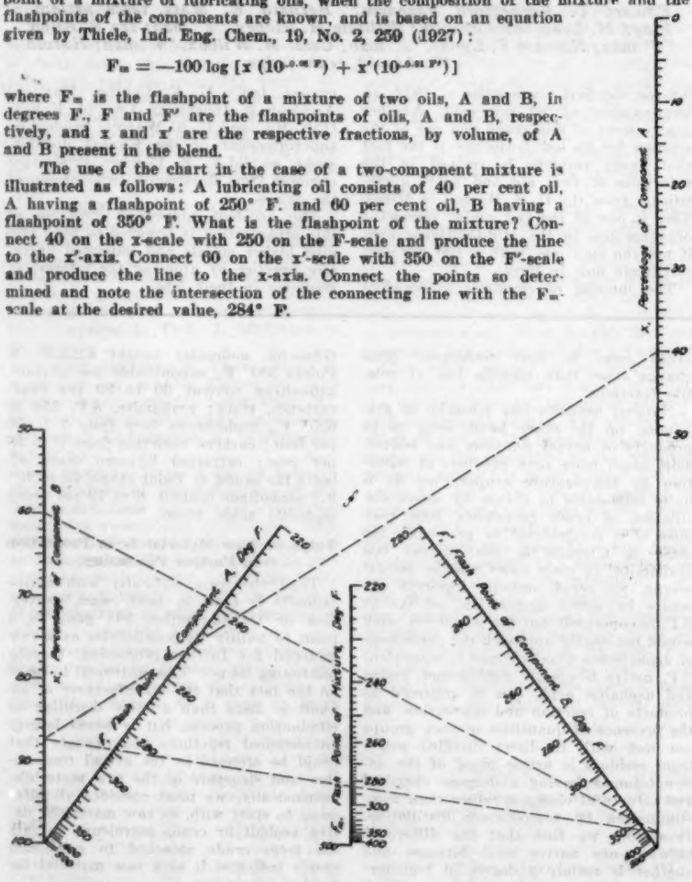
Dale S. Davis' Associates, East Northfield, Mass.

The accompanying alignment chart enables convenient calculation of the flashpoint of a mixture of lubricating oils, when the composition of the mixture and the flashpoints of the components are known, and is based on an equation given by Thiele, Ind. Eng. Chem., 19, No. 2, 250 (1927):

$$F_m = -100 \log [x\,(10^{-0.01\,F}) + x'(10^{-0.01\,F'})]$$

where F_m is the flashpoint of a mixture of two oils, A and B, in degrees F., F and F' are the flashpoints of oils, A and B, respectively, and x and x' are the respective fractions, by volume, of A and B present in the blend.

The use of the chart in the case of a two-component mixture is illustrated as follows: A lubricating oil consists of 40 per cent oil, A having a flashpoint of 250° F. and 60 per cent oil, B having a flashpoint of 350° F. What is the flashpoint of the mixture? Connect 40 on the x-scale with 250 on the F-scale and produce the line to the x'-axis. Connect 60 on the x'-scale with 350 on the F'-scale and produce the line to the x-axis. Connect the points so determined and note the intersection of the connecting line with the F_m-scale at the desired value, 284° F.


x, Percentage of Component A
x', Percentage of Component B
F, Flash Point of Component A, Deg F
F', Flash Point of Component B, Deg F
Fm, Flash Point of Mixture, Deg F

The flashpoint of a mixture of three oils can be calculated in a similar manner by finding first the flashpoint of the oil resulting from a mixture of any two components and then calculating the flashpoint of the oil resulting from combination of the mixture with the third oil. As an illustration of such a case consider the following data:

Oil	Percentage	Flashpoint
A	30	250
B	45	350
C	25	400

The flashpoint of the blend of A and B is 284° F. since the percentages, 30 and 45, are in the ratio of 40 : 60 as in the previous example. The problem then becomes that of calculating the flashpoint of a blend of 75 per cent of an oil having a flashpoint of 284° F. with 25 per cent of an oil having a flashpoint of 400° F. This will be found to be 296° F.

mined bounds. When this is done the residue formed is decidedly asphaltic in nature, and can be further processed either by straight reduction or oxidation to give products almost identical in physical character to straight reduced California, Quire Quire or Peruvian.

Straight reduced asphalt from cracking processes may also resemble coal tars in certain physical properties. The outstanding difference, however, is that in the carbonization of coal the organic compounds present and those that are formed are subjected to extremely high temperatures and the presence of large quantities of carboids and organic materials insoluble in CS_2 (free carbon) is generally indicative of extreme conversion impossible to control, unlike the case of conversion of heavy crude petroleum oils where temperature, pressure, and time is all under control. In no case is a commercial cracking unit operated under conditions where appreciable quantities of carbon or free carbon is formed.

The important features of high pressure conversion residues for further processing to asphalt are:

1. Up to a certain point the higher the temperature, pressure and the longer the time element, the greater the conversion and more asphaltic is the residue obtained.

2. The cracking coil residues when straight reduced give solid and semisolid asphalts of higher specific gravity, higher ductility and susceptibility to temperature change and considerably lower viscosities than equivalent S.P. direct reduced products from crude petroleum.

3. The cracking coil asphalts are as totally soluble in CS_2 as current asphalts from straight crude but dissolve partially or with difficulty in naphtha containing large quantities of paraffinic compounds, further indicating a greater asphaltic tendency (insolubility of asphaltenes in paraffin solvents).

We must add that the term "cracking" did not originate with the high temperature pressure conversion processes. The term has been carried over from the old shell still coking operations. In running to coke the residues in the still reaches so high a temperature that the condensate when dropping back into the liquid or onto the almost glowing coke is revaporized so rapidly that it is accompanied by a cracking sound. Rapid vaporization and a cracking sound is by no means indicative of dissociation. Water sprayed on hot metal or other hot surfaces will vaporize with a sound of broken glass without any indication of the water dissociating into its component parts of hydrogen and oxygen. In the modern cracking coil there is no possibility of recondensation of runback nor any indication of a "cracking sound" yet the term is still attached to it.

I am taking occasion to point out the fallacy of some terms commonly used. The effect of the term cracking has been to prejudice the construction engineer and to generally mislead the profession in regard to a source for bituminous materials that fills a real need. Construction of low cost roads is generally based on cold processes requiring primers, nonvolatile and volatile liquid asphalts. Straight crude asphalt with the exception of such as California or Quire Quire, never compared favorably with coal tar products in regard to penetration, wetting quality and per cent solid binder per unit volume upon setting. The cracking coil asphalts are characterized by their extremely low viscosity and produce primers and cut backs that are, if anything, superior to coal tar in as much as they have practically the same degree of wetting, cementitiousness, penetration and amount of solid binder base upon setting, minus the free carbon and extreme hardening tendencies of coal tar.

Current Asphalt Tests and Their Value for Specification Purposes

With an understanding of the basic facts regarding group constitution of asphalt, their apparent significance and the possibilities of modern methods of processing, it will be well to examine our present tests and see how far these reflect quality of finished product. If certain of our tests are basically unsound should we not discard them, particularly, if these tests still continue to form a basis for specifications?

Our work necessarily subdivides itself into methods of analysis and methods of tests. Analysis of asphalt is based mainly on selective solvents, methods of asphalt tests are largely based on physical indications and only indirectly on chemical behavior. Careful segregation of component groups by selective solvents and recombination definitely show that variation in asphaltene content is less likely to affect the final quality of the asphalt than quantity and character of the oily constituents. Of what value, therefore, are such tests as asphaltenes, petrolenes, fixed carbon, paraffin scale, carbenes, etc.? No one clearly knows the function of either and no failure or success of a finished paving mixture or asphalt roofing ever has been or can be definitely ascribed to the presence or absence of any fixed quantity of one group or another.

As an example we will take asphaltene content which test forms an integral part of many specifications. Extracted asphalt from Trinidad shows approximately 37 per cent asphaltenes for an S.P. of 140° F. A 140° F. S.P. paving asphalt from Mexican crude tests about 20 per cent asphaltenes, California of the same S.P. about 12 per cent, Colombia 16 per cent, Illinois 12 per cent, Texas crudes 9 to 17 per cent. Asphaltene content as a basis for specifications, therefore, is ambiguous.

The same holds true of fixed carbon. Our table on effect of oxidation of straight reduced crude residues illustrates how the asphaltene content can be increased and with it the carbon content over a rather wide range of variation in original product.

Paraffin scale, considered an objectionable constituent in some quarters, is far from harmful or even useless. In any case the method of determination is so faulty that what is assumed to be paraffin is very often high molecular weight hydrocarbons which very often are produced by the test itself and which may not be present in the original material.

Ductility is a test that would stand considerable revision. The usual conception of ductility is based on the notion that the asphalt that will pull out in the longest thread under given conditions is the best. The conditions of test are: A moulded strip of asphalt 1 centimeter wide and 1 centimeter thick at the most constricted point. The temperature specified is usually 77° F. and the speed of pull is 5 centimeters a minute.

First, one is inclined to question 77° F. as a logical test temperature. For substances that do not undergo any appreciable change in consistency between 150° F. and 0° F., such as highly compounded rubber, any temperature between these points or even below will serve the purpose of ascertaining its degree of stretch, elasticity, tensile strength, etc. A substance like asphalt, however, whose physical properties are radically affected by temperature change would, in accordance with all logical concepts, call for tests at some critical temperature or temperatures instead of 77° F. which is an ideal condition.

I feel justified in stating that ductility is positively the most misleading test we have on record and has done more towards imbuing people with erroneous notions regarding asphalt that any other test of questionable nature. Its contradictory character is decidedly apparent when lined up in relation to properties that seem to have some definite bearing on quality and service. High ductility is invariably accompanied by high susceptibility to temperature change, brittleness at low temperatures and rapid decrease in consistency at high temperatures. California straight steam reduced, high susceptibility asphalt is far more ductile at 77° F. than the corresponding oxidized or fluxed product, yet the lower susceptibility material produces the more stable paving mixture. The same holds true of Mexican or any other crude petroleum asphalt. Coal tar pitch is more ductile than any equivalent consistency asphalt and is entirely unsuitable for hot mix dense pavements as we produce them today.

TABLE 3

Oxidized to 80 Pen. at 77° F.	Straight reduced to 80 Pen. at 77° F.	Ductility at 77° F., 5 cms. a min. (cms.)	Ductility at 35° F., 5 cms. a min. (cms.)	Ductility at 35° F., 1 cm. a min. (cms.)
Colombian		60	11	14
Illinois		72	16	12.5
	Mexican	+110	8	17
	Californian	+110	6.5	21
	(Cracking coil tar 250 lbs. pressure)	+110	7	28
	(Cracking coil tar 750 lbs. pressure)	+110	9	29

Ductility Affected by Speed

Again, ductility is radically affected by speed. The asphalt that may break short at 5 centimeters a minute will stretch considerably longer at 3 centimeters per minute speed and correspondingly longer at 2 centimeters and 1 centimeter per minute.

It is interesting to note that the validity and soundness of this time honored test is at present being questioned to the extent where some engineers are specifying ductilities at low temperatures (40° F.) but in order to obtain some appreciable results or any results at all, the speed is reduced to 1 centimeter a minute. A line up of asphalts from different sources and of varying degrees of ductility at 77° F. 5 centimeters a minute gave some very interesting results when tested at 35° F. at rapid and reduced speeds of pull. These are shown in Table 3.

In other words, assuming that there is a remote possibility that high ductility serves some purpose in a paving mixture under traffic, the degree of its utility is decidedly dependent on impact, strains and stresses in the pavement being gradual and slow, which is a condition hardly met with under modern rapid moving vehicles. Even expansion and contraction of subsoils due to rapid temperature changes, may be quite sudden in its effect.

Deal With Extremely Thin Films

Finally, we must observe that in practice we deal with extremely thin films and not with masses of asphalt 1 cm. thick. If ductility has any significance we should determine and compare the ductility of paving mixtures at critical temperatures (32 to 45° F.) rather than a film 1 cm. thick at 77° F.

The matter of test temperatures, if and when, carefully considered will constitute a special and most important subject for our organization. What are the critical temperatures, at what time of the year do asphalt pavements fail most, what is the predominant nature of these failures and to what are they due? Therein lies the basic weakness of nearly all our tests and in turn with our investigations. An asphalt pavement will deteriorate and instead of investigating the causes of deterioration we run a ductility test or some other fully as indefinite a test at an ideal temperature. The pavement may distort under traffic loads at 120 to 140° F. yet penetration at 77° F. is given more prominence than penetration at the temperatures at which distortion has occurred.

It would, therefore, seem that we require a complete review or general overhauling of our asphalt tests, especially since recent work by the research chemist and observations in the field definitely indicate that most of the prevalent tests have little, if any direct bearing on the final product, be it a pavement or a roofing shingle. In fact, these tests are of little use even for identification purposes, as already pointed out, and we can artificially change the contents of any constituent group, irrespective of source of residue we start with.

It is therefore timely to suggest that our paving technologists should concentrate more on accelerated tests and try to correlate this work with research on ultimate composition of asphalt, character and function of constituents. The tendency should be to stress less, if not completely ignore tests that are little, if any, superior to the rule of thumb methods, even though the test originates in the laboratory and goes under some scientific designation.

Shortcomings Further Illustrated

The general shortcomings of our present asphalt tests are still further illustrated by recent work on resistance to deterioration and weathering of different asphalts. The outstanding facts in this connection are:

(a) That the lower the susceptibility of the asphalt, the better will it weather.

Proper Selection of Metal for Specific Use Often Is a Difficult Problem

By L. G. E. BIGNELL
Petroleum Engineering Editor

The oil industry presents such a variety of service conditions that a definite place seems to exist for most of the generally used metals. It can hardly be expected, however, that any one metal will serve to the greatest advantage under all conditions.

The engineering department confronted with the problem of selecting a metal for a specific use finds its task to be one of increasing difficulty. This is easy to understand when one considers the many claims and counterclaims advanced through the enthusiasm of each manufacturer for his particular product.

Unfortunately, the oil industry has, but with a few notable exceptions, made little if any concerted effort to untangle itself from its difficulties in spite of the fact that the cost of such effort would be a measurably small one compared to the annual loss chargeable to improperly selected materials.

Consider, for the moment, only the corrosion resisting angle of metals because, after all, the term "corrosion resisting" is relative. Even platinum will corrode if given time under the proper conditions.

Guessing is too costly and certainly the engineering departments of few companies could be indicted on this score. To select what seems to be the cheapest material is to merely sidestep the issue. Laboratory tests may certainly serve to guide the engineer in his further studies, but their shortcoming lies in the practical impossibility of duplicating all the conditions of service. Moreover, materials which are fundamentally different can not be measured by the same yardstick without the expectation of misleading results.

Well conceived service tests are admittedly quite reliable if sufficient time is available to eliminate too hasty conclusions. Such tests should always be run to completion or at least to a point where all but one of the metals under test fails.

An engineering department which is sufficiently fortunate to have maintained records of its past installations can with positive assurance reduce these records to an economic study. The majority of companies, however, are not in this fortunate position and for them a safe outlet is offered through a study of the history of the more commonly produced metals supplemented with proof of service which the more reliable manufacturers have available or can secure.

A poor weathering asphalt can be considerably improved by raising its softening point for a given penetration. Susceptibility as an indication of resistance to weathering is being further investigated with the view of determining if it be merely the physical change in relative consistency (S.P. versus penetration or reduction of slope in temperature penetration curve) or the chemical character of the material that goes with low susceptibility. So far the established means of improving susceptibility is oxidation, which invariably raises the carbon content in the asphalt and increases the mean molecular weight of practically all the other constituents.

(b) Presence of fine inert matter is found to definitely improve weathering. The refining industry has been engaged for the past two years in the study of relative value and improvement possible to affect by the addition or rather the dispersion of various fillers. Degree of improvement depends on quantity of fillers, fineness of particles, structure of particles and of these being thoroughly wetted by the asphalt.

Investigation on weathering and mineral filling is far from being complete, for the reason that the process of refining has a decided influence on resistance to weathering. Mexican asphalt 215° F. S.P. and 15 penetration shows considerably more deterioration than a Mexican asphalt processed to 220° F. S.P. and 20 to 25 penetration. A Venezuelan straight reduced residue oxidized to 220° F. S.P. and 15 penetration deteriorated more rapidly than a Venezuelan asphalt processed to 225° F. S.P. and 20 penetration. Our available information on asphalt today resolves itself into a series of indications. The indications, however, are such that they would serve as perfectly sound starting points for further basic research.

Line-up of Problems

A line-up of the most important problems that seem to have a definite bearing on our work would be:

1. Susceptibility of asphalt cements as effecting stability of a dense paving mixture to both distortion under a load at extreme temperatures and cracking at low temperatures.

This would necessarily include such phases of the problem as:

(a) Is cracking of pavements a result of contraction and expansion of compacted mixture? If this be the case we would have to determine in the laboratory effect of lowering or raising susceptibility of the asphalt cement on coefficient of expansion and contraction of the asphalt and coefficient of expansion and contraction of the asphalt in combination with the mineral aggregate, effect on pliability of the asphalt at low temperatures and in the same respects on the final compacted paving mixture.

(b) Is healing of cracks a function of susceptibility of the asphalt cement? We know that the degree of flowing together of a crack formed will depend on temperature, traffic load and susceptibility of the asphalt. Is the closing up of cracks effected by loss of cementitiousness, is loss in cementitiousness the result of aging or weathering?

2. Weathering of paving asphalts and resistance to weathering of finished paving mixtures.

3. Elasticity and pliability of asphalt cements at different temperatures as of greater value than ductility. In this connection it would be necessary to investigate in how far a certain range of pliability and elasticity is reflected in a paving mixture where the asphalt is distributed in exceedingly fine films. This would of itself lead us into consideration of tensile strength at different temperatures. Tensile crushing and bridging strength has been completely neglected in the study of asphaltic mixtures, yet we know that by the use of certain types of bitumens we can attain the same and even greater strength values than that developed by the average cement concrete.

4. Devising a method of testing consistency of asphalt that will be applicable over a wide range of temperatures. A method of this sort would be invaluable for comparative purposes, we would then be able to get a clearer picture of differences in materials we deal with expressed in the same terms.

5. Investigations of wetting quality, cementitiousness, interfacial tension, etc. Can we improve upon direct heat as a means of getting asphalt to adhere to mineral surfaces?

6. Effect of decreasing susceptibility to a point where we could use high softening point asphalts such as 200° F. S.P. 50 penetration and susceptibility factors as low as 1¼.

7. Possible improvement in methods of combining mineral filler and asphalt.

Each Should Have Definite Bearing

The above points could be so lined up that each should have a definite bearing on the other. We have to deal more with fundamentals than with apparent indications and hearsay. Production of dense, high stability pavements seem to have changed little, if any, in the past 30 or 40 years. Methods of compaction are practically the same although we have increasing evidence that tamping or corrugating the roller surface would enable us to start compacting hot laid paving mixtures at a much higher temperature and thus obtain a greater degree of density as well as reduce the ever recurring difficulty with feather cracking.

At this point we do not hesitate to advocate that this organization should take the lead in the investigation of fundamental problems, first by getting the proper people interested in a systematic study of some outstanding phase relating to a definite problem; second, in impressing investigators in general with the self-evident fact that isolation and nonco-operation is detrimental to the progress of the individual as well as the industry at large. It is very evident that these tendencies towards isolation and the absence in the past of genuine co-operation virtually turned asphalt technology into a sort of "bag of tricks." The asphalt laboratory was very often a means for discovering talking points, a supplement to trade-marks, commercial labels and patent factories, rather than what it actually should have been, a means to arrive at fundamental information that would form a basis for unbiased analysis, resulting in thorough and logical conclusions.

Our criticism of the present state of asphalt paving development is leveled more at public organizations than privately controlled enterprises. I have particular reference to universities and highway departments, state or Federal. Private organizations are competitive and necessarily secretive in their work. The commercial aspect of individually controlled investigations is so forceful and pressing that it usually centers on two outstanding thoughts, have we anything that the other fellow does not have if only for the time being, or, can we remain as is for the sake of immediate economy? In a public organization, however, these influences are considerably restricted, the view of a public investigator is very often, if not always, impartial.

Public Investigator's View Impartial

In conclusion we might say that a careful survey of asphalt research in the past will show that this tendency for isolation, this eagerness for getting at something spectacular, irrespective of basic utility, has been highly uneconomical and destructive even to private enterprise. Asphalt is a very flexible material, a characteristic that is responsible to a certain degree for the general confusion in the field of bituminous paving. Asphalt can be dissolved in volatile solvents, it can be dispersed in water and used in a variety of ways to give satisfactory or partially satisfactory results. Asphalt can be powdered and recombined with fluxes, it can be heated and applied by spraying and pouring. Whoever concocts a new mixture or process is not at all backward in making the most extraordinary claims. Failures are depreciated by more unfounded assertions and success is magnified to extraordinary dimensions. In face of this we are completely at loss for lack of sufficient basic knowledge regarding asphalt and asphaltic mixtures.

Our organization, therefore, should put forth all possible effort in initiating investigations on problems that would furnish data whereby we could definitely appraise the relative value of materials and methods.

Questions Raised by Petroleum Importers Put Before Bureau of the Customs

By C. E. KERN

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 11.—Some questions raised by petroleum importers in the East who are not yet familiar with the Treasury Department's views, were brought to the attention of officials of the Bureau of the Customs.

It should be understood that to be free of duty the article (petroleum and products) would have to be entered for warehouse storage and put in storage in a warehouse and then taken out by withdrawing for re-exportation free of duty, or if the importer has paid the duty the goods can be withdrawn and re-exported with a refund of 99 per cent of the duty as provided in Section 557 of the Tariff Act.

It will be seen that Section 557 declares that such merchandise may be withdrawn for exportation and if oil is placed on a vessel to be used as fuel oil it is not being exported. Therefore in order to permit such oil to be withdrawn from the warehouse free of duty or under the 99 per cent provision it was necessary to have a special provision of law amendatory of the Act of 1930 and Congress has enacted that provision in Section 309-A, the application of which is defined in T. D. 44,164 relating to drawback on ships' supplies.

The instructions do not include foreign vessels except when they are serving as vessels of war and it only includes vessels of the United States which are engaged in trade. However, if some one should wish to put the fuel oil on his private yacht there would be doubt about whether that would be subject to drawback and a ruling would have to be obtained if such allowance could be had at all. This covers cases where merchandise has not been "removed from custody and control."

The present understanding of impoc-ters is said to be that fuel oil imported for delivery to American vessels "going foreign" or engaged in runs between the Atlantic and Pacific Coasts, by way of the Panama Canal, is free of the import duty of 21 cents per barrel (and it is believed likewise that crude imported and refined into fuel oil for delivery to this class of buyers is likewise duty free).

The foregoing is a case in which merchandise is "removed from customs, custody or control." Under the drawback law if imported crude oil is refined here under a drawback regulation then there is a certain refund of duty upon the exportation of the product of that imported crude oil.

The drawback is allowable in ordinary cases under Section 313 of the Tariff Act dealing with articles manufactured or produced by the use of imported merchandise. It should be noted that the drawback is allowable upon the exportation of the article.

In as much as the holding of oil for use as supplies on vessels is not an exportation in order for drawbacks to be allowed on such oil a special provision of law has been necessary. This is provided for in Article 309-B of the Tariff Act of 1930 which provides for the allowance of drawback on articles manufactured or produced with the use of imported merchandise which are listed as supplies (not including equipment) on the vessels described in Section 309-A of the Act of 1930.

In respect to refunds of duties: Section 313 provides that the allowance of drawback shall be 99 per centum of the duty paid on the imported merchandise used in the manufacture or production of the exported article. In the case of the products of imported crude oil, however, Section 313 provides that the duty paid on the imported merchandise used shall be distributed to the several products thereof in accordance with their relative values at the time of separation. Since naphtha, gasoline and fuel oil and various other products result from a refining of imported crude it will be seen that the distribution of the duties paid on such crude is required by statute and that upon the exportation of the gasoline for example, the drawback will not be prepaid less 1 per cent theerof on a gasoline of imported crude or fuel oil.

Regulations covering the manufacture of products of fuel oil are being prepared by the Secretary of the Treasury.

Refiners who wish to obtain drawbacks on their products, either when exported by themselves or their customers, should file with the Commission of Customs an application for the allowance of drawbacks in the form provided by Article 1,022 of the Drawback Regulations.

Drawbacks cannot be obtained on products which are exported prior to the date on which such an application is lodged with the Commissioner of Customs. Copies of these general drawback regulations can be obtained from the nearest collector of customs or from the Bureau of Customs, Washington, D. C.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ended July 9 follows:

	Bbls.
WYOMING	
Salt Creek	23,150
Big Muddy	1,660
Badger Basin	50
Byron-Garland	2,800
Dallas Derby	220
Dutton Creek	80
Elk Basin	500
Ferris	20
Frannie	20
Grass Creek	1,210
Grey ull	0
Hamilton Dome	840
Hudson	450
La Barge	970
Lance Creek	80
Lost Soldier	2,370
Mule Creek	0
Midway	110
Notches	0
Oregon Basin	0
Osage	780
Pilot Butte	30
Rex Lake	0
Rock River	1,130
South Casper	0
Poison Spider	70
Teapot	30
Warm Springs	0
Total Wyoming	36,570
MONTANA	
Buckley-Border	540
Cat Creek	880
Dry Creek	620
Kevin-Sunburst	4,170
Lake Basin	40
Pondera	1,090
Total Montana	7,340
COLORADO	
Florence	240
Fort Collins and Wellington	820
Iles Dome	600
Moffat	620
Orchard	280
Rangely	80
Tow Creek	250
Total Colorado	2,890
NEW MEXICO	
Artesia	462
Caprock	855
Hogback	850
Jal	886
Rattlesnake	670
Table Mesa	70
Eunice	510
Hobbs	29,504
Lea	1,985
Texas-Pacific	98
Total New Mexico	35,391
Total Rocky Mountain area	82,191
Total previous week	80,429
Difference	1,762

Bureau of Mines Petroleum Statistics, Month of May, 1932

STOCKS OF CRUDE PETROLEUM
(Thousands of barrels of 42 U. S. gallons)

EAST OF CALIFORNIA	May 31, 1932	April 30, 1932*	May 31, 1931†
At refineries by location:			
East Coast: Domestic	8,824	8,771	10,082
Foreign	9,613	7,613	3,601
Appalachian	2,292	2,274	2,308
Indiana, Illinois, Kentucky, Michigan	3,832	3,600	2,428
Oklahoma, Kansas and Missouri	5,285	5,198	5,546
Texas: Inland	1,372	1,233	1,622
Gulf Coast: Domestic	7,045	6,663	7,075
Foreign	567	194	325
Arkansas and Inland Louisiana	403	472	627
Louisiana Gulf Coast: Domestic	3,181	2,290	5,719
Foreign	2,154	2,195	618
Rocky Mountain	1,709	1,719	1,937
Total	45,277	52,222	41,889
At refineries by origin:			
Pennsylvania Grade	2,056	2,021	2,153
Other Appalachian (inc. Kentucky)	797	763	818
Lima-N. E. Indiana-Michigan	185	256	179
Illinois-S. W. Indiana	116	131	139
N. Louisiana and Arkansas	1,196	1,171	3,336
West Texas and S. E. New Mexico	3,249	3,119	3,821
Oklahoma, Kansas, N. Texas, etc.	19,028	18,398	17,951
Gulf Coast: Grade A	1,373	1,536	2,717
Grade B	3,320	3,228	4,232
Rocky Mountain	1,623	1,597	1,994
California	.....	.....	5
Foreign	12,334	10,002	4,544
Total	45,277	42,222	41,889
Pipe line and tank farm:			
Pennsylvania Grade	4,917	4,819	5,667
Other Appalachian (inc. Kentucky)	873	915	990
Lima-N. E. Indiana-Michigan	1,378	1,480	1,476
Illinois-S. W. Indiana	10,634	10,489	10,168
N. Louisiana and Arkansas	15,629	15,787	18,996
West Texas and S. E. New Mexico	31,916	33,483	38,956
Oklahoma, Kansas, N. Texas, etc.	170,124	175,127	189,671
Gulf Coast	14,010	14,024	16,015
Rocky Mountain	24,794	24,521	24,342
Total	274,275	280,645	306,281
Total refinery, pipe line and tank farm	319,552	322,867	348,170
Producers'	5,750	5,852	6,262
Total crude east of California	325,302	328,719	354,432
CALIFORNIA: light	42,737	42,547	44,540
Total refinable crude in United States	368,039	371,266	398,972

*Revised. †Final figures.

PRODUCTION OF CRUDE PETROLEUM BY STATES
(Thousands of barrels of 42 U. S. gallons)

	May, 1932 Total	May, 1932 Dy.av.	April, 1932 Total	April, 1932 Dy.av.	Jan.-May, 1931	Jan.-May, 1931*
Arkansas	1,067	35	991	33	5,005	7,077
California:						
Kettleman Hills	1,825	59	1,811	60	9,097	4,221
Long Beach	2,489	80	2,464	82	12,228	13,628
Santa Fe Springs	1,978	64	1,989	66	9,953	10,804
Rest of State	9,284	299	9,260	309	45,487	51,382
Total California	15,576	502	15,524	517	76,825	80,035
Colorado	103	4	105	4	545	651
Illinois	453	15	431	14	2,180	1,923
Indiana:						
Southwestern	73	2	72	3	349	326
Northeastern	3	....	3	....	14	18
Total Indiana	76	2	75	3	363	344
Kansas	2,935	95	2,882	96	14,386	15,870
Kentucky	511	16	500	17	2,497	2,756
Louisiana:						
Gulf Coast	1,066	35	1,010	34	4,636	4,087
Rest of State	874	28	844	28	4,094	5,941
Total Louisiana	1,940	63	1,854	62	8,730	10,028
Michigan	560	18	513	17	2,410	1,312
Montana	225	7	250	8	1,068	1,257
New Mexico	1,129	36	1,122	37	5,652	6,080
New York	312	10	300	10	1,530	1,292
Ohio:						
Central and Eastern	317	10	312	10	1,498	1,879
Northwestern	99	3	97	3	452	475
Total Ohio	416	13	409	13	1,950	2,354
Oklahoma:						
Oklahoma City	3,206	103	3,138	104	16,409	20,282
Seminole	3,780	122	3,746	125	19,013	23,064
Rest of State	6,668	215	6,566	219	31,288	38,409
Total Oklahoma	13,654	440	13,450	448	66,710	81,755
Pennsylvania	1,135	37	1,108	37	5,318	4,587
Tennessee	1	....	1	....	1	4
Texas:						
Gulf Coast	3,322	107	3,153	105	15,869	22,239
West Texas	5,508	178	5,537	185	27,403	35,428
East Texas	10,692	345	10,657	355	50,777	21,409
Rest of State	7,404	239	7,264	242	36,080	40,590
Total Texas	26,927	869	26,611	887	130,129	119,666
West Virginia	345	11	348	12	1,656	1,850
Wyoming:						
Salt Creek	692	22	750	25	3,493	3,884
Rest of State	466	15	493	17	2,347	2,660
Total Wyoming	1,158	37	1,243	42	5,840	6,544
United States total	68,523	2,210	67,717	2,257	332,797	345,388

*Final figures—includes Alaska and Utah.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—MAY, 1932
(Thousands of barrels of 42 U. S. gallons)

	Straightrun Total	Straightrun †%	Straightrun *%	Cracked Total	Cracked *%	Cracked †%	Natural gasoline Total	Natural gasoline †%	Gasoline Total	Gasoline *%
East Coast	2,533	17.8	44.1	3,164	22.3	55.1	46	.8	5,743	40.1
Appalachian	839	25.9	52.9	724	22.3	45.6	23	1.5	1,586	48.2
Indiana, Illinois, etc.	2,227	23.4	42.7	2,776	29.2	54.4	99	1.9	5,102	52.6
Oklahoma, Kansas, Missouri	2,370	29.6	51.7	1,870	23.3	40.8	341	7.5	4,581	52.9
Texas Inland	1,350	30.1	57.4	835	18.7	35.5	167	7.1	2,352	48.8
Texas Gulf	3,115	21.3	48.5	2,929	20.1	45.6	380	5.9	6,424	41.4
Ark. and Louisiana Inland	406	23.6	52.4	300	17.4	38.7	69	8.9	775	41.0
Louisiana Gulf	825	23.6	50.5	697	19.9	42.7	111	6.8	1,633	43.5
Rocky Mountain	234	18.3	35.5	350	27.3	53.0	76	11.5	660	45.6
California	3,486	24.7	60.7	1,445	10.2	25.2	812	14.1	5,743	34.9
Total	17,385	23.2	50.3	15,090	20.2	43.6	2,124	6.1	34,599	43.6

*Per cent of crude run. †Per cent of total gasoline output.

COMPARATIVE ANALYSES
(Thousands of barrels of 42 U. S. gallons)

	May, 1932 Total	May, 1932 Dy.av.	April, 1932 Total	April, 1932 Dy.av.	Jan.-May, 1932	Jan.-May, 1931
CRUDE PETROLEUM:						
Runs to stills: Domestic	70,459	2,273	66,982	2,233	328,713	341,744
Foreign	4,210	136	4,149	138	18,118	20,710
Total	74,669	2,409	71,131	2,371	346,831	362,454
Imports	5,089	164	7,691	256	24,375	21,531
Exports	2,942	95	2,867	96	11,388	9,309
MOTOR FUEL:						
Production	35,300	1,139	33,607	1,120	166,293	174,852
Imports	1,170	38	*1,709	57	6,425	6,069
Exports	4,610	149	3,810	127	17,730	20,519
Stocks	†64,224	....	*†63,938	....	†64,224	47,223
Domestic demand	31,574	1,019	30,488	1,016	143,053	153,277
KEROSENE:						
Production	4,092	132	3,762	125	18,377	17,193
Imports	5	....	....	....	9	4
Exports	888	29	592	20	4,323	5,368
Stocks	4,812	....	4,417	....	4,812	5,960
Domestic demand	2,814	91	3,292	110	14,583	12,752
GAS OIL AND DISTILLATE OILS:						
Production	5,890	190	5,738	191	29,941	36,720
Stocks	12,396	....	11,607	....	12,396	16,820
RESIDUAL FUEL OILS:						
Production	20,030	646	19,766	659	97,310	105,102
Stocks‡	117,177	....	115,169	....	117,177	116,100
LUBRICANTS:						
Production	2,036	66	1,910	64	9,968	11,350
Imports	1	....	1	....	8	14
Exports	832	27	540	18	3,203	3,251
Stocks	8,809	....	9,139	....	8,809	10,119
Domestic demand	1,535	50	1,587	53	7,449	8,965
WAX (thousands of pounds):						
Production	39,760	1,283	36,680	1,223	215,600	187,600
Imports	1,669	54	1,954	65	20,199	12,205
Exports	17,034	549	18,876	629	92,274	114,995
Stocks	194,973	....	184,486	....	194,973	205,803
Domestic demand	13,908	449	18,246	608	119,772	111,599
COKE (short tons):						
Production	159,400	5,142	148,600	4,953	740,000	827,000
Stocks	1,554,200	....	1,519,800	....	1,554,200	1,250,300
ASPHALT (short tons):						
Production	250,400	8,077	211,100	7,037	903,200	1,055,100
Imports (natural)	2,100	68	200	7	6,600	.....
Stocks	414,100	....	391,300	....	414,100	379,800
ROAD OIL:						
Production	581	19	367	12	1,361	1,029
Stocks	986	....	825	....	986	572
STILL GAS:						
Production	3,664	118	3,382	113	16,482	14,295
MISCELLANEOUS:						
Production	684	22	656	22	2,662	1,592
Stocks	1,156	....	1,067	....	1,156	630

*Revised. †Includes terminal and transit stocks, pipe line stocks, and stocks of motor blends held at natural gasoline plants. ‡Includes heavy crude in California.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, MAY, 1932*
	Completions Oil	Completions Gas	Completions Dry	Total initial prod. (bbls.)	Aver. initial prod. (bbls.)	Drilling May 31
Texas	723	16	138	1,536,900	2,100	948
East Texas†	578	1	16	1,502,800	2,600	404
Gulf Coast	30	1	23	13,000	400	94
West Texas	17	...	6	2,600	200	100
California	11	...	11	4,100	400	120
Kettleman Hills	...	...	...	.....	....	14
Long Beach	1	...	1	100	100	6
Playa del Rey	1	...	...	1,500	1,500	1
Oklahoma	54	6	29	63,600	1,200	322
Oklahoma County	17	...	...	60,400	3,600	62
Pottawatomie County-Seminole County	3	...	1	1,200	400	32
New Mexico	3	...	1	1,500	500	49
Lea County (Hobbs)	1	...	...	1,000	1,000	6
Other states	177	55	90	50,100	300	965
Total United States	968	77	269	1,650,200	1,700	2,404

*From The Oil and Gas Journal and California office of the American Petroleum Institute. †Initial production for the East Texas Field calculated from field reports.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM EAST OF CALIFORNIA
(Thousands of barrels of 42 U. S. gallons)

Domestic petroleum by fields of origin:	May, 1932 Total	May, 1932 Daily av.	April, 1932* Total	April, 1932* Daily av.	Jan.-May, 1932	Jan.-May, 1931†
Appalachian:						
Pennsylvania Grade	1,822	59	1,856	62	8,882	8,747
Other (inc. Kentucky)	674	22	745	25	3,471	3,593
Lima-N. E. Ind.-Mich.	837	27	657	22	3,134	1,698
Ill.-S. W. Ind.	393	13	356	12	1,697	2,285
Mid-Continent:						
N. La. and Ark.	2,081	67	1,946	65	11,007	15,167
W. Texas-S. E. N. Mex.	8,144	263	7,746	258	36,415	49,268
Other (Okla., Kans., N. Tex., etc.)	39,043	1,259	36,488	1,216	176,327	161,411
Gulf Coast	4,474	144	3,463	115	20,131	28,761
Rocky Mountain	1,228	39	1,430	48	6,241	9,166
Total demand	58,696	1,893	54,687	1,823	267,315	280,096
Exports	2,095	68	1,937	65	7,053	5,958
Domestic demand	56,601	1,825	52,750	1,758	260,262	274,138
Foreign petroleum	2,757	89	5,622	188	16,535	20,840
Total domestic demand east of California	59,358	1,914	58,372	1,946	276,797	294,978

*Revised. †Final figures.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*
	May, 1932	April, 1932	May, 1931	Jan.-May, 1932	Jan.-May, 1931
Oil	968	793	498	3,649	2,337
Gas	77	81	178	472	932
Dry	269	296	355	1,246	1,967
Total	1,314	1,170	1,031	5,367	5,236

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES
(Thousands of barrels of 42 U. S. gallons)

	May, 1932	April, 1932	May, 1931	Jan.-May, 1932	Jan.-May, 1931
Motor fuel turned into lines	2,656	*2,349	1,122	11,380	2,515
Motor fuel delivered from lines	2,671	2,357	862	11,062	1,923
Shortage	1	....	†5	19	†8
Stocks in lines and working tanks end of month	1,261	*1,277	800	1,261	800

*Revised. †Overage.

SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons)

NEW SUPPLY:	May, 1932	April, 1932*	May, 1931	Jan.-May, 1932	Jan.-May, 1931
Domestic production:					
Crude petroleum	68,523	67,717	76,822	332,797	345,358
Daily average	2,210	2,257	2,478	2,189	2,287
Natural gasoline	3,079	3,102	3,879	15,869	19,786
Benzol	98	112	176	578	873
Total production	71,700	70,931	80,877	349,244	366,047
Daily average	2,313	2,364	2,609	2,297	2,424
Imports:					
Crude petroleum	5,089	7,691	4,512	24,375	21,531
Refined products	2,874	4,683	2,847	18,671	16,288
Total new supply, all oils	79,663	83,306	88,236	392,290	404,466
Daily average	2,570	2,777	2,846	2,581	2,679
Increase in stocks, all oils	1,473	2,826	447	4,510	†9,795
DEMAND:					
Total demand	78,190	80,479	87,789	387,780	414,261
Daily average	2,522	2,683	2,832	2,551	2,743
Exports:					
Crude petroleum	2,942	2,867	2,268	11,388	9,309
Refined products	8,891	7,772	11,987	36,636	52,526
Domestic demand	66,357	69,840	73,534	339,756	352,426
Daily average	2,141	2,328	2,372	2,235	2,334
Excess of daily average domestic production over domestic demand	172	36	237	62	90
STOCKS (end of month):					
Crude petroleum:					
East of California	325,302	328,719	354,432	325,302	354,432
California‡	42,737	42,547	44,540	42,737	44,540
Total refinable crude	368,039	371,266	398,972	368,039	398,972
Natural gasoline	4,265	4,340	4,029	4,265	4,029
Refined products‡	264,651	259,876	253,866	264,651	253,866
GRAND TOTAL STOCKS, ALL OILS	636,955	635,482	656,867	636,955	656,867
Days' supply	253	237	232	250	239
Bunker oil (included above in domestic demand)	3,242	3,436	4,286	16,344	19,162

*Revised. †Decrease. ‡California heavy crude and residual fuel included under refined products.

STOCKS HELD BY REFINING COMPANIES, MAY 31, 1932

(Thousands of barrels of 42 U. S. gallons)

	Gasoline: At refineries	Gasoline: At bulk terminals	Gasoline: Total	Kerosene	Gas oil and distillate fuels	Residual fuel oils
East Coast	6,762	12,608	19,370	942	2,021	4,585
Appalachian	1,890	407	2,297	187	511	501
Indiana, Illinois, Kentucky, etc.	6,014	2,460	8,474	481	1,127	3,098
Oklahoma, Kansas, Missouri*	4,264	1,184	5,448	326	1,399	2,563
Texas inland*	2,157	119	2,276	133	514	3,324
Texas Gulf*	5,640	333	5,973	1,127	1,447	5,730
Louisiana Gulf	1,864	410	2,274	196	616	3,475
Arkansas and Louisiana inland	234	191	425	29	166	551
Rocky Mountain	2,070	.....	2,070	250	237	350
California	14,361	(†)	14,361	1,141	4,358	192,940
Total	45,246	17,712	62,958	4,812	12,396	117,177

	Wax (thousands of lbs.): Lubricants	Wax: Crude scale	Wax: Refined	Wax: Total	Coke (tons)
East Coast	2,943	27,216	29,717	55,933	20,400
Appalachian	1,097	16,506	4,399	20,905	6,700
Indiana, Illinois, Kentucky, etc.	896	22,566	2,228	24,804	236,800
Oklahoma, Kansas Missouri	658	3,936	1,985	5,921	179,000
Texas inland	78	.....	282	282	146,900
Texas Gulf	1,867	1,931	13,873	15,804	604,000
Louisiana Gulf	76	34,535	1,304	35,839	111,300
Arkansas and Louisiana inland	22	.....	.....	.....	.....
Rocky Mountain	224	34,327	1,158	35,485	142,700
California	948	.....	.....	.....	106,400
Total	8,809	141,017	53,956	194,973	1,554,200

	Asphalt (tons)	Road oil	Miscellaneous products	Unfinished oils	Natural gasoline
East Coast	157,200	40	79	7,783	60
Appalachian	33,700	58	26	1,513	2
Indiana, Illinois, Kentucky, etc.	93,500	143	680	6,410	34
Oklahoma, Kansas, Missouri	3,100	235	66	3,126	25
Texas inland	.....	...	9	1,227	7
Texas Gulf	5,300	11	8	10,776	311
Louisiana Gulf	36,900	...	5	2,071	2
Arkansas and Louisiana inland	26,500	6	7	709	3
Rocky Mountain	3,300	214	41	1,831	5
California	52,600	249	236	18,745	2,763
Total	414,100	986	1,156	44,191	3,211

*Gasoline stocks revised as follows (thousands of barrels):

	At refineries: Texas inland	At refineries: U. S. total	Terminal: Okla.	Terminal: Texas Gulf	Terminal: U. S. total
Dec., 1931	2,055	37,445	796	183	13,875
Jan., 1932	2,199	41,501	991	278	14,528
Feb., 1932	2,277	46,719	1,112	189	14,033
Mar., 1932	2,062	46,950	1,010	251	14,680
Apr., 1932	1,981	46,624	1,083	262	16,032

†Included with "at refineries." ‡Includes heavy crude. §Includes 4,771,000 bbls. tops.

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 U. S. gallons)

	May, 1932 Total	May, 1932 Daily av.	April, 1932 Total	April, 1932 Daily av.	Jan.-May, 1932	Jan.-May, 1931
Straightrun gasoline	17,325	561	17,675	589	83,695	87,105
Cracked gasoline	15,090	487	13,420	448	69,470	69,748
Natural gasoline:						
Blended at refineries	2,012	65	1,871	62	9,760	14,995
Blended at plants*	3	...	3	...	17	67
Run through pipe lines†	113	4	127	4	566	389
Jobbers, exports, etc.	600	19	399	13	2,207	1,675
Benzol produced‡	98	3	112	4	578	873
Total motor fuel	35,300	1,139	33,607	1,120	166,293	174,852

*East of California. †To refineries in California. ‡Estimated.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 U. S. gallons)

	May, 1932 Total	May, 1932 Daily av.	April, 1932 Total	April, 1932 Daily av.	Jan.-May, 1932	Jan.-May, 1931
Production	3,079	99	3,102	103	15,869	19,786
Decrease in all stocks	75	3	.....	...	.....	.....
Total	3,154	102	3,102	103	15,869	19,786
Blended at refineries	2,012	65	1,871	62	9,760	14,995
Blended at plants east of Calif.	3	...	3	...	17	67
Run through pipe lines in Calif.	113	4	127	4	566	389
Jobbers, exports, etc.	600	19	399	13	2,207	1,675
Increase in all stocks	...	...	310	11	1,447	829
Balance	427	14	392	13	1,872	1,731
Total	3,154	102	3,102	103	15,869	19,786

IMPORTS AND EXPORTS OF CRUDE PETROLEUM AND MAJOR REFINED PRODUCTS*

(Thousands of barrels of 42 U. S. gallons)

CRUDE PETROLEUM:	May, 1932	April, 1932	May, 1931	Jan.-May, 1932	Jan.-May, 1931
Imports	5,089	7,691	4,512	24,375	21,531
From Mexico	730	1,684	1,085	4,717	2,865
From Venezuela	3,460	3,756	2,276	13,565	11,807
From Colombia	669	1,929	1,088	5,288	6,280
From other countries	230	322	63	805	779
Exports:					
Domestic crude oil	2,942	2,867	2,268	11,388	9,309
To Canada	2,217	2,151	1,833	8,066	7,256
To other countries	725	716	435	3,319	2,053
Shipments	....	.....	.....	3	.....
REFINED PRODUCTS:					
Gasoline:					
Imports	1,170	1,709	1,050	6,425	6,089
Exports†	4,610	3,810	4,877	17,730	20,519
To United Kingdom	2,078	1,164	1,608	6,125	6,641
To France	351	475	413	2,241	2,432
To Canada	184	185	355	815	1,222
To other countries	1,801	1,769	2,431	7,879	9,711
Shipments	196	217	70	670	513
Kerosene:					
Exports	888	592	1,162	4,323	5,368
To China	169	3	110	434	636
To United Kingdom	243	48	115	1,174	1,226
To other countries	445	528	920	2,622	3,437
Shipments	31	13	17	93	69
Gas oil and fuel oil:					
Imports	1,680	2,985	1,788	12,121	10,755
Exports	2,320	2,594	2,675	10,384	12,704
To Japan	752	555	657	2,798	2,257
To Chile	....	.....	397	171	1,527
To other countries	1,368	1,690	1,323	6,200	7,513
Shipments	200	349	388	1,115	1,407
Lubricants:					
Exports	832	540	741	3,203	3,251
To United Kingdom	167	191	160	879	650
To France	145	54	103	421	569
To other countries	513	291	469	1,870	1,999
Shipments	7	4	9	33	33
Wax (thousands of lbs.):					
Imports	1,669	1,954	1,394	20,199	12,205
Exports	17,034	18,876	17,586	92,274	114,995
To United Kingdom	4,279	5,308	4,409	27,446	26,171
To Italy	1,894	3,902	2,463	12,859	23,335
To other countries	10,860	9,664	10,796	51,957	65,476
Shipments	1	2	2	12	13

*From the Bureau of Foreign and Domestic Commerce. †Includes benzol—264 bbls. in May.

RUNS TO STILLS AND OUTPUT OF REFINERIES, MAY, 1932

(Thousands of barrels of 42 U. S. gallons)

Input—	Crude oil: Domestic	Crude oil: Foreign	Crude oil: Total	Unfinished oils rerun	Natural gasoline	Total input
East Coast	10,106	4,088	14,194	434	46	14,674
Appalachian	3,242	....	3,242	157	28	3,422
Ind., Ill., Ky., etc.	9,507	....	9,507	158	99	9,764
Okla., Kans, Mo.	8,009	....	8,009	423	341	8,773
Inland Texas	4,477	....	4,477	155	167	4,799
Texas Gulf	14,534	54	14,588	276	380	15,244
Louisiana Gulf	3,432	68	3,501	60	111	3,672
Ark. and La., inland	1,721	....	1,721	296	69	2,086
Rocky Mountain	1,281	....	1,281	251	76	1,608
California	14,149	....	14,149	533	*812	15,494
Total	70,459	4,210	74,669	2,743	2,124	79,536

Output—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thousands lbs.)
East Coast	5,743	514	894	4,115	568	16,800
Appalachian	1,586	313	103	292	390	6,720
Ind., Il., Ky., etc.	5,102	409	575	1,105	181	3,640
Okla., Kans., Mo.	4,581	679	663	1,416	213	2,240
Inland Texas	2,352	189	222	1,519	31	280
Texas Gulf	6,424	1,066	1,582	3,617	459	3,360
Louisiana Gulf	1,633	315	334	1,011	27	4,760
Ark. and La., inland	775	80	156	495	14	.....
Rocky Mountain	660	64	99	344	27	1,960
California	5,743	463	1,271	6,116	126	.....
Total	34,599	4,092	5,899	20,030	2,036	39,760

Output—Cont'd	Coke (tons)	Asphalt (tons)	Road oil	Still gas	Miscellaneous	Unfinished products	Shortage
East Coast	11,600	132,700	34	728	11	903	315
Appalachian	2,400	16,900	25	210	18	227	129
Ind., Ill., Ky., etc.	66,100	38,400	189	727	472	424	19
Okla., Kans., Mo.	24,900	900	96	346	86	234	319
Inland Texas	7,600	.....	...	132	9	67	238
Texas Gulf	33,500	14,300	3	866	3	823	140
Louisiana Gulf	5,100	9,600	...	132	1	10	113
Ark. and La., inland	200	4,400	10	46	15	389	81
Rocky Mountain	7,600	400	35	75	1	204	12
California	400	32,900	139	402	70	501	480
Total	159,400	250,400	531	3,664	684	3,782	1,846

*Includes 112,000 bbls. run through pipe lines.

PRODUCTION OF CRUDE PETROLEUM BY FIELDS

(Thousands of barrels of 42 U. S. gallons)

FIELD:	May, 1932 Total	May, 1932 Daily av.	April, 1932 Total	April, 1932 Daily av.	Jan.-May, 1932	Jan.-May, 1931*
Appalachian:						
Pennsylvania Grade	1,955	63	1,919	64	9,233	8,664
Other (inc. Kentucky)	666	21	650	22	3,263	3,705
Lima-N. E. Ind.-Mich.	662	21	613	20	2,876	1,805
Ill.-S. W. Ind.	526	17	503	17	2,529	2,249
Mid-Continent:						
N. La. and Ark.	1,941	63	1,835	61	9,099	13,018
W. Texas-S. E. N. Mex.	6,613	213	6,617	221	32,894	41,307
Other, Okla., Kans., N. Tex., etc.)	34,686	1,119	34,253	1,141	167,953	159,624
Gulf Coast	4,388	142	4,163	139	20,505	26,326
Rocky Mountain	1,510	49	1,640	55	7,614	†8,655
California	15,576	502	15,524	517	76,825	80,035
Total	68,523	2,210	67,717	2,257	332,797	345,388

*Final figures. †Includes Alaska and Utah.

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN UNITED STATES*

(Thousands of barrels of 42 U. S. gallons)

	May, 1932	April, 1932	May, 1931	Jan.-May, 1932	Jan.-May, 1931
Gasoline	923	544	1,016	3,193	6,256
Natural gasoline	72	.....	336	145	805
Kerosene	.....	81	.....	31	88
Gas oil and Diesel oil	80	71	.....	268	938
Fuel oil	.....	.....	.....	.....	2
Lubricants	.....	9	1	19	38
Asphalt	1	.....	2	4	8
Miscellaneous	23	1	.....	26	.....
Total	1,104	706	1,355	3,736	8,135

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

East Texas Activities Are Gradually Decreasing Due to Constant Decline in Allowable

By L. E. BREDBERG

DALLAS, Tex., July 11.—Drilling in East Texas is gradually decreasing, probably due to the constant per well allowable curtailment every two weeks bringing the wells down toward a smaller amount from which the gross revenues will be negligible compared with what the wells might have been allowed to produce if such a vast number had not been drilled.

The wells are cut back every two weeks in order to keep the daily allowable of the field to the maximum of 325,000 bbls. set by the Railroad Commission. The present daily per well allowable is 50 bbls. There were 115 locations reported this week.

Operators continue to drill more than one well per 20 acres and in many cases have drilled more than one well on 10 or even 5 acres, thereby causing a great number of offsets to be drilled. One of the major purchasing companies sent out a letter on July 6 stating it would not connect to a well started on that date, located on a tract which already had the prescribed number of wells according to the 20-acre order, that is; if an operator had five wells on 100 acres or less, the company would not connect with another well drilled by the operator on that tract. The letter was sent to operators and leaseholders from whom the company was purchasing crude and to whose leases it was already connected. Other purchasing and pipe line companies may follow this company's move, thereby taking a great step toward curtailment of drilling activities, especially on leases which already have their prescribed number of wells. It should have great effect in stopping the subdivision of small strips in order to drill one or more wells on such small tracts, causing many more offset wells to be drilled. If operators who propose to drill more than one well to 20 acres cannot obtain connection for excess wells before they are drilled, it will no doubt hold up the drilling of many wells, especially at the present time.

Promised Connections

The East Texas Pipe Line Committee met in Dallas July 8, and 58 wells were promised connections, while 10 others were tentatively guaranteed connections, and 38 other wells were left to be considered by several purchasing companies which could not commit themselves at the meeting. The following companies agreed to take more connections:

Sun Pipe Line Co. and Humble Pipe Line Co., 23 wells; Empire Pipe Line Co., 10; East Texas Refining Co., 10; Magnolia Pipe Line Co., 8; Shell Pipe Line Co., 4; Southern Pipe Line Co., 4; Arkansas Pipe Line Co., 2; Wales Pipe Line Co., 3, and Camden Pipe Line Co., 4.

No wells were submitted to the East Texas Refining Co., Wales and Camden Pipe Line Cos., but they volunteered to connect with the number following their respective companies, thereby helping the larger purchasers in handling the situation.

Fewer Completions

Completions declined during the week ending July 7, only 140 more producers being put on production reports, 26 less than the previous week. Production for the seven-day period averaged 335,997 bbls. per day, while distribution fell a little below the production figures, or 333,045 bbls. per day, leaving 2,952 bbls. going to storage each day during that time. There are now over 6,700 producers in the field, but with activities decreasing at the present rate, it looks as if the field had witnessed its last frenzied drilling pace, the most recent lasting the past four months and equaling the wild rush of drilling and producing in June, July and part of August of 1931. There should be in the neighborhood of 7,400 or 7,500 wells in the field by September 1 if locations and completions hold above 100 per week.

Salt Water Report

The last salt water report compiled by the Railroad Commission, ending July 8, shows 115 wells in the field which are making, or have made, various percentages of salt water. Eight of the wells are standing dead. The attached report shows the wells, survey, subsea datums on top of Woodbine sand, and at total depth, and amount of water each well is making.

Joiner Area

Wells making salt water in East Texas Field follow:

British American's No. 1 J. D. Stone, M. J. Pru Survey, top sand minus 3,276 feet, total depth minus 3,288 feet, now clear, set packer.

Dearing & Sons' No. 1 Goforth, Lindley Survey, top sand minus 3,287 feet, total depth minus 3,303 feet, 6 per cent water.

Droppleman's No. 1 Warren, W. G. Tutt Survey, top sand minus 3,320 feet, total depth minus 3,327 feet, 46 per cent water.

Goodgame & Eby's No. 1 Holland, Lindley Survey, top sand minus 3,325 feet, total depth minus 3,328 feet, 75 per cent water.

Gulf Production Co.'s No. 2-A W. Shaw, F. Cordova Survey, top sand minus 3,298 feet, total depth minus 3,310 feet, .8 per cent water.

Gulf Production Co.'s No. 7 George Turner, F. Cordova Survey, top sand minus 3,301 feet, total depth minus 3,307 feet, 12 per cent water, plugging well again.

M. & G. Oil Co.'s No. 1 DeQuerin, W. G. Tutt Survey, top sand minus 3,305 feet, total depth minus 3,310 feet, 25 per cent water.

M. & G. Oil Co.'s No. 1 Key, W. G. Tutt Survey, top sand minus 3,320 feet, total depth minus 3,325 feet, 35 per cent water, pumping.

M. & G. Oil Co.'s No. 1 Minor, W. G. Tutt Survey, top sand minus 3,311 feet, total depth minus 3,317 feet, 3.5 per cent basic sediment and water.

M. & G. Oil Co.'s No. 1 Priddy, W. G. Tutt Survey, top sand minus 3,312 feet, total depth minus 3,318 feet, 80 per cent water.

M. & G. Oil Co.'s No. 1 Teague, W. G. Tutt Survey, top sand minus 3,313 feet, total depth minus 3,319 feet, 5 per cent basic sediment and water.

McLester Drilling Co.'s No. 1 Johnson, H. B. Dance Survey, top sand minus 3,292 feet, total depth minus 3,304 feet, 50 per cent basic sediment and water.

Arch Page's No. 1 Florey, Lindley Survey, top sand minus 3,323 feet, total depth minus 3,325 feet, 25 per cent water.

Risinger and others' No. 1 Barton, W. G. Tutt Survey, top sand minus 3,314 feet, total depth minus 3,318 feet, 30 per cent basic sediment and water.

Sinclair Prairie's No. 2 Allen Kersh, Fawlks Survey, top sand minus 3,312 feet, total depth minus 3,315 feet, .2 per cent basic sediment and water.

Spider Oil Co.'s No. 1 Florey & Neal, W. G. Tutt Survey, top sand minus 3,317 feet, total depth minus 3,321 feet, 15 per cent water.

Stewart & Duffey's No. 1 Florence, W. G. Tutt Survey, top sand minus 3,317 feet, total depth minus 3,319 feet, 35 per cent water.

Sunbeam Oil Co.'s No. 1 Brandon, W. G. Tutt Survey, top sand minus 3,317 feet, total depth minus 3,322 feet, now dead.

A. M. Sutton's No. 1 Wilson, J. Lindley Survey, top sand minus 3,312 feet, total depth minus 3,321 feet, 49 per cent basic sediment and water.

Smith County

East Texas Refining Co.'s No. 1 Tyiska, R. Wilson Survey, top sand minus 3,316 feet, total depth minus 3,320 feet, 40 per cent water.

Florence Oil Co.'s No. 1 S. S. Cook, Vargas Survey, top sand minus 3,320 feet, total depth minus 3,323 feet, 1 per cent water.

Florence Oil Co.'s No. 2 S. S. Cook, Vargas Survey, top sand minus 3,317 feet, total depth minus 3,323 feet, 40 per cent water.

Gant & Wagoner's No. 1 Stone-Temple, D. Shaw Survey, top sand minus 3,320 feet, total depth minus 3,336 feet, 1 per cent basic sediment and water.

Long Drilling Co.'s No. 1 G. M. Turner, H. Hussner Survey, top sand minus 3,320 feet, total depth minus 3,323 feet, 35 per cent basic sediment and water.

J. E. Lucas' No. 1 Church Lot, J. Jordon Survey, top sand minus 3,324 feet, total depth minus 3,327 feet, 8 per cent basic sediment and water.

Lucas-Hobbs' No. 1 Sartain, J. Jordon Survey, top sand minus 3,320 feet, total depth minus 3,333 feet, 4 per cent basic sediment and water.

Sinclair Prairie's No. 1-A Jarvis, Vargas Survey, top sand minus 3,310 feet, total depth minus 3,320 feet, clear.

Sinclair Prairie's No. 2-A Mayfield, Jordon Survey, top sand minus 3,303, feet, total depth minus 3,312 feet, 5 per cent paraffin.

Sinclair Prairie's No. 14-A Mayfield, Jordon Survey, top sand minus 3,319 feet, total depth minus 3,321 feet, 20 per cent basic sediment and water.

Sinclair Prairie's No. 1 E. E. Moore, Vargas Survey, top sand minus 3,303 feet, total depth minus 3,323 feet, clear, plugged back to 3,308 feet.

Sinclair Prairie's No. 1 Amanda Wiley, Jordon Survey, top sand minus 3,308 feet, total depth minus 3,316 feet, 30 per cent water.

Sinclair Prairie's No. 7 Amanda Wiley, Jordon Survey, top sand minus 3,358 feet, total depth minus 3,340 feet, 30 per cent water.

Sun Oil Co.'s No. 1 J. J. Denton, Vargas Survey, top sand minus 3,303 feet, total depth minus 3,310 feet, 3-7 per cent basic sediment and water.

Sun Oil Co.'s No. 2 J. J. Denton, Vargas Survey, top sand minus 3,303 feet, total depth minus 3,307 feet, 5-7 per cent basic sediment and water.

Sun Oil Co.'s No. 1 R. L. Henson, Vargas Survey, top sand minus 3,311 feet, total depth minus 3,313 feet, trace of water.

Thomason & Co.'s No. 1 S. S. Cook, Vargas Survey, top sand minus 3,322 feet, total depth minus 3,327 feet, 2-4 per cent water.

Kilgore Area—Northern Rusk County

Brown & Wilson's No. 1 M. R. Terrell, Sevier Survey, top sand minus 3,319 feet, total depth minus 3,331 feet, 50 per cent water, 2 per cent basic sediment and water.

Burton Drilling Co.'s No. 1 Florey, P. Holmes Survey, top sand minus 3,354 feet, total depth minus 3,373 feet, 40-50 per cent water.

Burton Drilling Co.'s No. 2 Florey, P. Holmes Survey, top sand minus 3,309 feet, total depth minus 3,312 feet, clear.

Cameron Oil Co.'s No. 1 Warren, J. Womack Survey, top sand minus 3,315 feet, total depth minus 3,319 feet 30 per cent water.

Carroll & Taylor's No. 1 Gipson, T. Lloyd Survey, total depth minus 3,328 feet, 75 per cent water.

Chapman and others' No. 1 Russell, English Survey, top sand minus 3,330 feet, total depth minus 3,339 feet, 40-50 per cent basic sediment and water.

Crude Oil Producing Co.'s No. 1 Gipson, T. Lloyd Survey, top sand minus 3,322 feet, total depth minus 3,328 feet, 60 per cent water.

East Texas Refining Co.'s No. 1 S. B. Wills, Chisum Survey, top sand minus 3,323 feet, total depth minus 3,327 feet, 2 per cent water.

East Texas Refining Co.'s No. 5 S. B. Wills, Chisum Survey, top sand minus 3,283 feet, total depth minus 3,364 feet, 1.5 per cent water.

East Texas Refining Co.'s No. 1 Sample, Chisum Survey, top sand minus 3,299 feet, total depth minus 3,503 feet, 2 per cent water, 2 per cent basic sediment and water.

Harry Elliott's No. 1 M. B. Terrell, A. M. Ryan Survey, top sand minus 3,321 feet, total depth minus 3,333 feet, dead.

Everts Drilling Co.'s No. 1 P. G. Warren, J. Womack Survey, top sand minus 3,320 feet, total depth minus 3,341 feet, 5-1 per cent basic sediment.

Guthrie and others' No. 1 Perry, W. R. Cook Survey, top sand minus 3,304 feet, total depth minus 3,311 feet, 35-50 per cent basic sediment and water.

K. & P. Oil Co.'s No. 1 McNeely (Brock), R. W. Smith Survey, top sand minus 3,267 feet, total depth minus 3,342 feet, clear.

McMahon and others' No. 1 Mrs. D. Wills, Chisum Survey, top sand minus 3,312 feet, total depth minus 3,315 feet, 2 per cent water, basic sediment.

Magnolia Petroleum Co.'s No. 1 Florey, Holmes Survey, top sand minus 3,317 feet, total depth minus 3,338 feet, 27 per cent water.

Mercury Oil Co.'s No. 1 Warren, Womack Survey, top sand minus 3,315 feet, total depth minus 3,318 feet, 2 per cent water.

Frank Russell's No. 1 Powers, Womack Survey, top sand minus 3,329 feet, total depth minus 3,339 feet, .5 per cent basic sediment.

Shell Petroleum Corp.'s No. 1 Dorcas Wills, Chisum Survey, top sand minus 3,300 feet, total depth minus 3,311 feet, 2 per cent basic sediment and water.

Shell Petroleum Corp.'s No. 4 Dorcas Wills, Chisum Survey, top sand minus 3,317 feet, total depth minus 3,322 feet, 10 per cent water.

Stanolind Oil & Gas Co.'s No. 1 Christian, W. R. Cook Survey, top sand minus 3,322 feet, total depth minus 3,325 feet, .5 per cent water, 9 per cent basic sediment.

Stanolind Oil & Gas Co.'s No 1 Willie Smith, Killen Survey, top sand minus 3,342 feet, total depth minus 3,348 feet, clear.

State Production Co.'s No. 1 Gipson, T. Lloyd Survey, top sand minus 3,325

feet, total depth minus 3,328 feet, 80 per cent water.

Sun Oil Co.'s No. 1 Barker, Ryan Survey, top sand minus 3,315 feet, total depth minus 3,317 feet, 2-15 per cent basic sediment and water.

The Texas Company's No. 2 Chappell, Elliott Survey, top sand minus 3,320 feet, total depth minus 3,322 feet, 13 per cent water.

Ward Oil Co.'s No. 3 J. R Beall, Chisum Survey, top sand minus 3,310 feet, total depth minus 3,312 feet, 5 per cent water, 3 per cent basic sediment.

Southern Gregg County

Baggett-Ward and others' No. 1 Ella Samples, Chisum Survey, top sand minus 3,320 feet, total depth minus 3,324 feet, dead.

F. A. Bates' No. 1 Cole, Bramlett Survey, top sand minus 3,287 feet, total depth minus 3,310 feet, 1 per cent water, 3 per cent basic sediment.

Continental Oil Co.'s No. 1 C. C. Crews, L. Perkins Survey, top sand minus 3,330 feet, total depth minus 3,338 feet, 1 per cent water, 3 per cent basic sediment.

Continental Oil Co.'s No. 2 Crews, L. Perkins Survey, top sand minus 3,330 feet, total depth minus 3,332 feet, 5 per cent water, 4 per cent basic sediment.

Continental Oil Co.'s No. 4 C. C. Crews, L. Perkins Survey, top sand minus 3,328 feet, total depth minus 3,336 feet, clear.

Central Commercial Oil Co.'s No. 1 King, Tennison Survey, top sand minus 3,328 feet, total depth 3,331 feet, 1 per cent basic sediment and water.

Cranfill & Reynolds' No. 1 J. M. Blackman, Chisum Survey, top sand minus 3,276 feet, total depth minus 3,276 feet, 20 per cent basic sediment and water.

Deep Rock Oil Co.'s No. 1 Jeffery, Chisum Survey, top sand minus 3,312 feet, total depth minus 3,318 feet, 3.5 per cent water, 2 per cent basic sediment.

Deininger's No. 1 Strong, Beaty Survey, top sand minus 3,318 feet, total depth minus 3,321 feet, 5 per cent water.

M. T. Flanagan's No. 1 Walker, S. T. Davis Survey, top sand minus 3,327 feet, total depth minus 3,332 feet, dead.

B. N. Hester's No. 1 Crews, Perkins Survey, top sand minus 3,322 feet, total depth minus 3,323 feet, dead.

Hughes' No. 2 A. A. King, Tennison Survey, top sand minus 3,308 feet, total depth minus 3,310 feet, 2 per cent water.

Iowa-Payne's No. 1 Walker, Grisham Survey, top sand minus 3,313 feet, total depth minus 3,322 feet, 1-5 per cent water.

H. P. Key's No. 1 Joe King, Chisum Survey, top sand minus 3,287 feet, total depth minus 3,298 feet, clear.

Magnolia Petroleum Co.'s No. 1 M. T. Cole, Johnson Survey, top sand minus 3,322 feet, total depth minus 3,324 feet, 30 per cent water.

Mazda Oil Co.'s No. 1 M. Cotton, Chisum Survey, top sand minus 3,317 feet, total depth minus 3,326 feet, 2 per cent water, 2 per cent basic sediment.

Merron & Mays' No. 1 Sarah Dansby, Chisum Survey, top sand minus 3,300 feet, total depth minus 3,311 feet, 1 per cent water.

Merron & Mays' No. 2 W. Hawkins, Chisum Survey, 19 per cent water.

Octagon Oil Co.'s No. 1 J. M. Blackman, Chisum Survey, top sand minus 3,314 feet, total depth minus 3,317 feet, 3 per cent water.

Plummer and others' No. 1 J. R. Beal, Chisum Survey, top sand minus 3,314 feet, total depth minus 3,317 feet, 18 per cent water, 2 per cent basic sediment.

Sinclair Prairie's No. 1 M. T. Cole, Brooks Survey, top sand minus 3,290 feet, total depth minus 3,303 feet, 1 per cent basic sediment and water.

Sinclair Prairie's No. 5 M. T. Cole, Brooks Survey, top sand minus 3,308 feet, total depth minus 3,325 feet, clear.

Stanolind-Simms Oil Co.'s No. 1 A. W. Miller, S. T. L. Davis Survey, top sand minus 3,312 feet, total depth minus 3,335 feet, clear.

Sun Oil Co.'s No. 1 E. L. Walker, Friar Survey, top sand minus 3,326 feet, total depth minus 3,329 feet, 71 per cent water.

Tidal Oil Co.'s No. 1 J. E. Choice, Chisum Survey, top sand minus 3,319 feet, total depth minus 3,322 feet, 10 per cent water.

Universal Oil & Gas Co.'s No. 1 Adkins, Dainwood Survey, top sand minus 3,328 feet, total depth minus 3,336 feet, 20-75 per cent water.

Winston Oil Co.'s No. 2 Paul Jones, Chisum Survey, top sand minus 3,289 feet, total depth minus 3,316 feet, clear.

Wise & Jackson's No. 1 W. Dickey, W. H. Johnson Survey, top sand minus 3,316 feet, total depth minus 3,320 feet, 10 per cent water, 5 per cent basic sediment.

Wainwright & West, Ltd.'s No. 1 J. M. Martin, J. Taylor Survey, top sand minus 3,324 feet, total depth minus 3,326 feet, 3 per cent water, 3 per cent basic sediment.

Welch & Sandlem's No. 1 Barnett, Johnson Survey, top sand minus 3,317 feet, total depth minus 3,321 feet, 1 per cent basic sediment and water.

Zion Oil Co.'s No. 1 Barnett, Taylor Survey, top sand minus 3,334 feet, total depth minus 3,346½ feet, 80 per cent water, abandoned.

Longview Area—Northern Gregg County

T. A. Johnson and others' No. 1 Mrs. A. C. Dillard, Cregston Survey, top sand minus 3,273 feet, total depth minus 3,299 feet, 60 per cent water, pumping.

Upshur County

Alma Petroleum Corp.'s No. 1 Younce, William Goodwin Survey, top sand minus 3,328 feet, total depth minus 3,319 feet, 4 per cent water.

Black & Case's No. 1 Burroughs, William King Survey, top sand minus 3,308 feet, total depth minus 3,316 feet, 2 per cent water, 1 per cent basic sediment.

California Petroleum Co. of Venezuela's No. 1 Culpepper, William King Survey, top sand minus 3,303 feet, total depth minus 3,322 feet, 8 per cent basic sediment and water.

J. W. Clark, Inc.'s No. 1 E. H. Hamilton, Chandler Survey, top sand minus 3,320 feet, total depth minus 3,328 feet, 9 per cent water.

Cranfill & Reynolds' No. 1 Rash Estate, E. N. Eubanks Survey, top sand minus 3,377 feet, total depth minus 3,400 feet, 50 bbls. water.

Galvez Oil Co.'s No. 1 Moore heirs, D. Ferguson Survey, top sand minus 3,275 feet, total depth minus 3,306 feet, 10-15 per cent water, 10 per cent basic sediment.

Humble Oil & Refining Co.'s No. 1 D. C. Shelton, William King Survey, top sand minus 3,300 feet, total depth minus 3,316 feet, sold, changing tank sites.

Humble Oil & Refining Co.'s No. 1-C O'Byrne, J. R. Watkins Survey, top sand minus 3,307 feet, total depth minus 3,315 feet, .3 per cent water.

Idaho Oil Co.'s No. 1 East Mountain Baptist Church, W. King Survey, top sand minus 3,307 feet, total depth minus 3,315 feet, dead.

Jay-Kay Oil Co.'s No. 1 Victory, Pineda Survey, top sand minus 3,304 feet, total depth minus 3,311 feet, 6 per cent water.

J. A. Johnson and others' No. 1 John Hargraves, M. Mann Survey, top sand minus 3,303 feet, total depth minus 3,306 feet, 19 per cent water.

Murphy and others' No. 1 V. J. Watkins, J. M. Pineda Survey, top sand minus 3,296 feet, total depth minus 3,312 feet, 1 per cent water, 2 per cent basic sediment.

W. H. Peckham and others' No. 1 J. W. Free, William King Survey, top sand minus 3,309 feet, total depth minus 3,319 feet, 15 per cent water.

Sorrels and Owens' No. 1 Brawley Estate, M. Mann Survey, top sand minus 3,314 feet, total depth minus 3,316 feet, .7 per cent water.

Taxman and others' No. 1 Callahan, Evans Survey, top sand minus 3,304 feet, total depth minus 3,316 feet, 40-50 per cent water.

Trico Oil Co.'s No. 1 A. D. Adkins, William King Survey, top sand minus 3,293 feet, total depth minus 3,309 feet, .5 per cent water.

Trico Oil Co.'s No. 1 East Mountain School Lot, William King Survey, top sand minus 3,292 feet, total depth minus 3,321 feet, 4 per cent water, 1 per cent basic sediment.

Ty-Tex Oil & Development Co.'s No. 1 Sam Kay, Augustin Survey, top sand minus 3,343 feet, total depth minus 3,353 feet, dead.

Weaver Young and Alexander's No. 1 Everett, Goodwing Survey, top sand minus 3,321 feet, total depth minus 3,325 feet, 85 per cent water.

The Texas Company's No. 3 H. L. Phillips, Hokit Survey, top sand minus 3,319 feet, total depth minus 3,321 feet, 30 per cent water.

Three more wells were added to the pumping list this week, the total number of such wells gaining almost every week as one or two wells are brought in with insufficient pressure to flow them, necessitating pumping. Tapered tubing is successful in making flowing wells of some of them, but pumping has to be resorted to also. One well on the eastern edge of the Kilgore area, Sinclair Prairie Oil Co.'s No. 9 Lawther in the M. Garrestt Survey, Gregg County, failed to flow at 3,593 feet, after coring 25 feet of broken sand from 3,549-74 feet, and will no doubt have to be put on the pump to produce its daily allowable. Shell Petroleum Corp.'s No. 2-A Wells in the Henry Hobson Survey, Rusk County, also failed to flow when drilled to 3,746 feet, and J. E. Crosbie, Inc., and others' No. 1 Camp in the J. C. Barnett Survey, in the same county, will also be added to the pumping list. It was given a 20-quart shot from 3,510-17 feet to increase production but failed in this effort.

Seepage Oil

Shallow wells were once drilled on the eastern side of the Yates Pool, Pecos County, yielding a considerable amount of seepage oil every day, the oil finding its way down structure through the lime from wells in which casing seats were not firm, or in which casing had split allowing the oil to flow up outside of the casing until it found a way out through some stratum to the lower part of the field where it was salvaged by these shallow wells or in pits which were dug to trap the oil, and from which it was pumped. A similar case of seepage oil has been reported in the Gladewater area, Gregg County. One small company drilled an 800-foot test for water, but encountered an estimated 400-bbl. per day oil producer, and is planning to drill two more shallow tests on this same lease. The oil is evidently coming from one or more offset wells in which either the casing is split or broken, or in which the casing seat is not holding, allowing the oil to come up outside of the casing and finding its way through higher sands to other areas.

Maddox Development Co.'s No. 1 Starr in the Cooper Survey, 2 miles east of Cranfill & Reynolds' No. 1 Rash producer in Upshur County, has been swabbing. Pressure is insufficient to flow the well, and it went dead after swabbing a small amount of oil on a five-hour test. It is now cleaning out to be tested again, and if it makes a producer will no doubt have to be put on the pump. Total depth is 3,666 feet. The Cranfill & Reynolds extension well, which has been flowing a small amount of oil and some water since its completion the fore part of the year, is now going on the pump. These two tests are northern markers for the field.

Farming Leases

The Shell Petroleum Corp., which has been foremost in the farming out of edge leases in the field during the past few months, subleased 120 acres of the Cole lands in the Thomas Johnson Survey, southwest Gregg County, to John Mabee who will be required to drill seven wells immediately to take care of offsets which are now producing. Shell retained a five-sixteenths overriding interest in the property.

The Continental Oil Co. farmed out a 200-acre lease in the southern part of the Leonard Pickens Survey, and 35 acres of its C. C. Crews lease in the same survey, Gregg County, including two wells on the former lease, to the Russell Petroleum Co.

The Turman Oil Co. purchased 45 acres and five wells on the Kangerga lands, in the Pru Survey, Rusk County, from Grayburg Oil Co. of San Antonio.

U. Hampton acquired lease from the Gulf Production Co. on the G. H. Morris farm in the W. R. Cook Survey, Rusk County, for a consideration of $50,000 out of oil produced therefrom.

It is understood the Simms Oil Co. and East Texas Refining Co. are working on a deal whereby, if it is consummated, the former company will acquire the latter's leases, pipe lines, refineries and other properties in the district. East Texas Refining Co. has two refineries in the district, one at Longview, and one at Friars Switch in Rusk County. Simms Oil Co. has a refinery at Dallas, several hundred acres of producing leases in the field, and is part owner in several hundred acres of other leases.

Sun Oil Co.'s No. 7 Gray in the D. Sanches Survey, on the northeastern side of the Gregg County area, swabbed 25 bbls. of oil in two hours and is preparing to put it on pump. It topped sand at 3,609 feet and was bottomed at 3,687 feet. It has been appearing as a dry hole, but will perhaps make its daily allowable on the pump.

Carter Oil Co. has plugged back its No. 1 Kelly in the De Los Santos Coy Survey in Cherokee County, set 30 feet of perforated pipe and is endeavoring to make a producer out of the test which was reported last week as showing 100 per cent salt water from total depth of 3,762 feet. Total depth is doubtful on account of hole being crooked. The test is 1,900 feet southwest of Merry Brothers and Perini's well, which was the discovery well of the county, and southwest extension of the Joiner area. Elevation is 380 feet.

Van Field—Van Zandt County

There were two more tests abandoned in the Van Field this week. The Humble Oil & Refining Co.'s No. 2 L. A Dowdle in the William Daniel Survey, northern part of the field, was plugged and abandoned at 2,987 feet, and Pure Oil Co.'s No. 2 Mertie Elliott in the A. H. Wiley Survey, southeastern part of the field, was abandoned at a total depth of 3,020 feet.

There are only five wells drilling in the field and only one location was made this week.

Wildcatting

Mannas and Suggs have taken 995 acres in the J. Johnson, D. Moore, B. F. Laws, U. A. Pope and J. H. Thomas Surveys, just southeast of Humble Oil & Refining Co.'s block in the northern part of Franklin County, and are seeking more acreage adjacent to this block.

De Genther and others have been adding to their block on the south line of the county, and have about 5,000 acres in Franklin, and the same amount over the line in Wood County.

Joiner and others have rewritten leases on the Clayton D. Brown block in the northeastern part of Titus County, and northwestern part of Morris County, and the test in the Bard Evans Survey, which has been shut down at 2,250 feet, will be deepened and two other tests drilled on the block.

Tracy Flannigan of Longview is trying to assemble acreage for a test between Shasta Oil Co.'s No. 1 Hall dry hole, in Upshur County, and Meadows and Gochee's No. 1 Davidson dry hole in Harrison County. Both of these tests had good oil showings.

NEW LOCATIONS

Gregg County

Owen & Johnson's No. 1 M. T. Cole on A. Park Survey. M. T. Cole's No. 1 Fee on M. T. Cole Survey. Grisham-Hunter Corp.'s No. 1-F Texas & Pacific Railroad on H. R. Holt Survey. Sun Oil Co.'s No. 11 J. M. Haynes on G. A. Thompson Survey. Prince Brothers' No. 4 H. M. Williams on H. H. Edwards Survey.

Sun Oil Co.'s No. 9 G. Reese on J. Hoy Survey; No. 12 J. M. Haynes on G. A. Thomason Survey; No. 13 J. M. Haynes on G. A. Thomason Survey. Levi Gambill's No. 2 J. C. Clayborn on I. Baity Survey. Sinclair-Prairie Oil Co.'s

(Continued on Page 46)

Eleven New Locations Staked in West Texas, Five in Wichita Falls, Eleven in Ranger

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 11.—West Texas reported 11 locations this week, and one old producer was preparing to deepen to increase production. This is the greatest number of locations staked in the district for a long time. J. D. Young Co. announced location for its No. 1 Shannon in Section 35, Block 1, G.C.&S.F. Survey, approximately 6½ miles southwest of the Powell Pool in Crockett County. Two locations were announced for Ector County, and B. C. Mann staked location for another wildcat in Glasscock County, in Section 11, Block 35, Township 3s, T.&P. Survey. It is to be spudded by July 16. It is approximately 6 miles west of No. 1 fee which was abandoned last week in Section 27, Block 34, same township and survey. The second test is about 8 miles southwest of the World Pool in Glasscock County. The Big Spring Drilling Co. will drill the test for Mann.

Sid Richardson and others have staked location for their No. 2 Sealy estate in Section 94, Block A, G.M.M.B.&A. Survey, in the vicinity of a dry hole which the company abandoned a month ago. The first test appeared a producer, but failed to qualify. This area is between the O'Brien Pool to the south in Ward County, and the Hendrick Field on the north. Richardson and others also made location for a test in the Scarborough area in north Winkler County.

Ten Completions

There were 10 tests completed in the district, 9 of which were producers. Eppenauer Drilling Co. completed its No. 1 Allen in the Wheat Pool, Loving County, the largest producer completed in the field in the past two years. The well topped the Delaware lime at 4,263 feet, and the Delaware sand at 4,287 feet, logging the pay at 4,288 feet. It was plugged back to 4,299 feet from total depth of 4,305 feet, and shot with 180 quarts from 4,256-99 feet making an initial flow of 680 bbls. of oil per day through 6-inch casing, with an estimated 3,000,000 feet of gas. The company's No. 1 Harrill was completed for a 360-bbl. pumper at total depth of 4,265 feet. The larger producer is in Section 4, Block 2, W.&N.W. Survey, and the smaller in Section 92, Block 1, same survey.

Gaines County

Anhydrite was topped in McElreath and Suggett and others' No. 1 Sparks in Section 397, Block G, Gaines County, at 1,833 feet, or around 140 feet lower than it was logged in the Humble Oil & Refining Co.'s No. 1 Carswell dry hole, drilled approximately 9 miles to the southwest. Surface elevation of the Sparks test is 3,418 feet.

Irion County

Apollo Oil Co. added another small producer to the small shallow producing Irion County Pool, when its No. 4 Nutt in Subdivision 5, Gonzales County school land was completed at a total depth of 1,467 feet for an estimated 20 bbls. on the pump. It topped the sand pay horizon at 1,462 feet.

Stanolind Oil & Gas Co.'s No. 1 Williams in Section 1,195, T.T. Survey, Ordovician test in Irion County, is preparing to cement back to bottom of 8-inch casing at 5,925 feet and will try to make new hole from that point. New and repaired equipment has been installed and work has been resumed after a long shut down as a result of fire.

Coke County Wildcat

Mid-Kansas Oil & Gas Co.'s No. 1 Henry in Section 271, Block 1-A, H.&T.C. Survey, Coke County wildcat, is drilling around 3,000 feet after picking up an increase in sulphur water from 2,830-40 feet, and from 2,870-80 feet, filling the hole at 2,895 feet. This well is drilling near an old test by the same company which had a good showing of oil.

Howard County

Sinclair Prairie Oil Co. has brought in its No. 2 Dodge in Section 11, Township 1s, Block 30, T.&P. Survey, eastern Howard County, flowing and swabbing 260 bbls. of oil in 24 hours after a 300-quart shot from 2,628-2,733 feet. Bottom of the hole is 2,794 feet, and pay was topped at 2,462 feet. The company has made another location in this small pool which was opened two years ago by the Sinclair Oil & Gas Co.

Glasscock County

Noel T. Lawson and others' No. 1 Edwards in Section 16, Township 1s, Block 33, T.&P. Survey, Glasscock County, is appearing as a half mile western extension to the Howard-Glasscock County Pool. It topped the Edwards lime at 2,060 feet, and the lime pay at 2,112 feet, filling 1,400 feet with oil in three hours. Total depth is 2,115 feet, and elevation is 2,577 feet. It is now waiting on cement to set after 8-inch casing was cemented at 2,085 feet.

Pipe Line Report

The latest production and pipe line report for the West Texas district shows that West Texas stocks are the lowest they have been during the past few years. On May 1 they were down to 24,044,947 bbls., whereas on May 1, a year ago, they were 29,148,000 bbls. Present room is 27,721,769 bbls. These figures prove that a steady withdrawal has taken place during the past year. No one company has over 5,500,000 bbls. in storage in the district at the present time, whereas two years ago one company had almost half again as much in storage. Several of the fields have had their daily allowables cut from time to time, while the Yates Field, the largest in the district, has been held to 65,000 bbls. per day for many months, all of which has helped to put the district in the most healthful condition so far as production and storage is concerned. Some operators contend the Yates Pool should be curtailed still further, but this field has always been produced under rigid conservation plans, has been held to the minimum while it has had a large daily potential, and many think should not be sacrificed because of the wild orgy of drilling in East Texas which is responsible for the present agitation to curtail the Yates Field. There are only 400 producers in the field.

Ward County

Jack Lydecker and others' No. 1 Pecos Mercantile Co., in Section 16, Block 34, H.&T.C. Survey, in the Penn-Bennett area, southern Ward County, encountered two bailers of water this week when deepened from 2,566 feet to 2,602 feet. It is now cleaning out and will be plugged back to shut off the water. It logged 500 feet of oil from 2,316-18 feet, and at 2,532 feet started flowing at the rate of 15 bbls. of oil per hour, estimated good for a 250-bbl. well at 2,566 feet before deepening. It is a diagonal offset to Penn Oil Co. and Atlantic Oil Producing Co.'s No. 1 Bennett, the discovery well of this area which was opened in November of 1929. The discovery well made 140 bbls. in 12 hours at total depth of 2,618 feet.

Ranger and Wichita Falls

Locations fell in these two districts this week to around 30, the former district having only 5, 3 of which were in Brown County and 2 in Shackelford County. There were 11 completions in the Ranger district, one of considerable importance due to the fact that it is located in the old Dalton Pool, Palo Pinto County, between two dry holes. This well is owned by U. Dalton and associates, and is in Section 1,790, T.&L. Survey, 450 feet north of the original Dalton producer which opened this area in the north central part of the county. The well topped the pay at 4,062 feet, and was completed for an initial production of 200 bbls., 1 foot in the sand.

A. Z. Kouri and others have made location for their No. 2 C. A. Montgomery in Block 133, Harris Subdivision, 50 feet south and 50 feet west of their No. 1 which was a 48-bbl. well from sand logged at 1,120-24 feet. The second test in this area will be drilled to 2,300 feet, or the Canyon series. The first test opened a new shallow pool for the area, approximately 2 miles northwest of Archer City in Archer County.

W. B. Hamilton and others' No. 1 A. J. Ikard, southwest of Archer City, Archer County, encountered saturated Gunsight lime which produces in the Anarene Pool, and is estimated good for 35 or 40 bbls. per day from 1,155-63 feet and 1,163-68 feet. The well is 2 miles from production, and designates another shallow producing area for the county. Two locations have been made near the discovery, one to the west, and one to the northeast.

Panhandle District

July 16 a hearing will be held by the Railroad Commission at Pampa, at which time it will hear complaints from a number of operators who are alleging production inequalities in the Panhandle district, resulting from protection granted two companies by the fifty-third district court at Austin in September, 1930. These two companies are said to be producing their properties as they desire and offset lease holders also producing their properties according to leases of these two companies in order to prevent their properties from being drained. Permit was granted the offset lease holders to produce their leases to equalize oil and gas drainage.

Wildcat Operations in West Texas

Week Ending July 11

Company, well, farm name, section and block—	Remarks—
BORDEN COUNTY	
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n, T.&P. Sur.	T.D. 270 ft.; running 12½-in. csg.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Joiner's No. 1 McIntire, 553 ft. from S and 2,390 ft. from E, Sec. 31, Blk. 352, W. J. Mitchell Sur.	Rigging up cable tools.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	S.D. 1,750 ft.
CONCHO COUNTY	
Beesley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	S.D. 1,700 ft.
CROCKETT COUNTY	
California Co.'s No. 1 O'Byrne, 2,310 ft. from S and 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 2s, T.&P. Sur.	Rigging up.
Doleman & Moore's No. 1 Ferner, 2,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and F D*
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,320 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	T.D. 512 ft.; rigging up rotary.
The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line. Sec. 36½, I.&G.N. Sur.	S.D. 252 ft.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	Location.
COKE COUNTY	
Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 980 ft. from S and W, Sec. 271, Blk. 1-A, H.&T.C. Sur.	Drlg. 2,975 ft.
DAWSON COUNTY	
Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R Sur.	To resume drilling.
ECTOR COUNTY	
Broderick & Calvert's No. 1 Parker, 330 ft. from N and W, Sec. 15, Blk. 44, Twp. 2s, T.&P. Sur.	Rig.

(Continued on Next Page)

COMPLETIONS IN WEST TEXAS

Concho County

Turner's No. 1 Brosing, dry and abandoned, total depth 1,850 feet.

Glasscock County

Lion Oil & Refining Co.'s No. 1 Coffe, top pay 2,296 feet, initial production 850 bbls. of oil, 30 per cent sulphur water, per day, total depth 2,337 feet. Kirby Petroleum Co.'s No. 1 Baker, top pay 2,313 feet, initial production pumping 27 bbls. per hour, total depth 2,420 feet. Schermerhorn Oil Co.'s No. 5 Kloh and others, top pay 2,155 feet, initial production 1,328 bbls. per day pumping, total depth 2,500 feet.

Howard County

Pure Oil Co.'s No. 12 Chalk, top pay 1,726 feet, total depth 1,850 feet, plugged back to 1,760 feet, initial production 48 bbls. per day pumping.

Loving County

Eppenaner Drilling Co.'s No. 1 Allen, top pay 4,288 feet, initial production 680 bbls. per day, total depth 4,305 feet; No. 1 Harrill, top pay 4,253 feet, initial production 360 bbls. per day pumping, total depth 4,265 feet, plugged back to 4,263 feet, shot 180 quarts 4,224-63 feet.

Pecos County

Culberson Brothers' No. 11-B Monroe, top pay 465 feet, initial production 80 bbls. pumping, total depth 520 feet.

Ward County

Gulf Production Co.'s No. 21 O'Brien, top pay 2,590 feet, shot 240 quarts 2,595-2,760 feet, initial production 330 bbls.,

total depth 2,765 feet. Sturms and Simms Oil Co.'s No. 2 Jones, top pay 2,494 feet, initial production 75 bbls., total depth 2,518 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Carson County

The Texas Company's No. 1-C Garner, top pay 3,025-45 feet, initial production 62 bbls. swabbing, total depth 3,045 feet.

Gray County

Danciger Oil & Refining Co.'s No. 9 Powell Beck, top pay 2,895-2,900 feet, initial production 400 bbls. on gas lift, total depth 2,900 feet. Warner Oil Co.'s No. 3 Chapman, top pay 2,670-2,710 feet, swabbed 30 bbls. per hour, total depth 2,718 feet.

East Texas Fields

(Continued from Page 44)

No. 8 A. A. King on J. G. Walker Survey, A. M. Loomis' No. 1 W. Smith on J. S. Caruthers Survey. Blue Star Oil Co.'s No. 3-G Sabine River on J. W. Johnson Survey; No. 3-H Sabine River on F. W. Johnson Survey; No. 3-I Sabine River on F. W. Johnson Survey; No. 3-J Sabine River on F. W. Johnson Survey.

Stanolind Oil and Gas Co.'s No. 8 H. Key on W. H. Hart Survey; Gulf Producing Co.'s No. 9 R. H. Still on John Wilkinson Survey. D. W. Henke's No. 1 C. L. Taylor on Castleberry Survey. Guiberson Oil Co.'s No. 1 C. L. Taylor on Castleberry Survey. Stanolind Oil & Gas Co.'s No. 6 Cox & Hamon on William Castleberry Survey. Sun Oil Co.'s No. 6 J. Rollins on M. Scott Survey. E. L. Smith Oil Co.'s No. 2 C. L. Taylor on Castleberry Survey; No. 3 C. L. Taylor on Castleberry Survey. East Texas Oil Refining Co.'s No. 6 A. Christian on G. W. Hooper Survey. Magnolia Petroleum Co.'s No. 2 W. B. Kee on J. Lindley Survey. Sun Oil Co.'s No. 3 D. G. Sparks on H. H. Kirk Survey. Liner Inc.'s No. 3-F J. C. Clayborn on I. Baity Survey. Yount-Lee Oil Co's No. 6 J. Flemister on G. W. Hooper Survey. Humble Oil and Refining Co.'s No. 13 W. R. Hughes on Dolores Sanchez Survey; No. 3 J. S. Elder on M. Van Winkle Survey.

Rio Oil Corp.'s No. 1 L. Graves on M. Irwin Survey. Gulf Production Co.'s No. 5 E. L. Walker on John Tate Survey. Sun Oil Co.'s No. 13 Hilburn-Lloyd on W. P. Chisum Survey. Magnolia Petroleum Co.'s No. 2 N. Towels on John Blair Survey. Humble Oil and Refining Co.'s No. 4 A. L. Hughes on W. C. Wakeland Survey. J. C. O'Brien's No. 2 M. Prothro on John Blair Survey. Atlantic Oil Production Co.'s Nos. 22 and 23 J. M. Moore on F. W. Johnson Survey. Columbia Oil and Gas Co.'s No. 5 A. Christian on G. W. Hooper Survey. W. C. Turnbow Petroleum Co.'s No. 2 J. C. McKinley on D. Sanchez Survey. Sun Oil Co.'s No. 12 M. T. Cole on A. Park Survey. Atlantic Oil Production Co.'s No. 2 G. Davis on W. P. Chisum Survey.

Rhoades Drilling Co.'s No. 1 Sabine River on A. Park Survey; No. 2 Sabine River on F. W. Johnson Survey; No. 2 Sabine River on M. T. Cole Survey; No. 1 Sabine River on A. Park Survey; No. 1 Sabine River on J. M. Keiser Survey; No. 2 Sabine River on J. M. Keiser Survey. Wheelock & Collins' No. 5 W. M. Clayton on L. B. Outlaw Survey. Arctic Oil Co.'s No. 1 R. H. Rowland on M. Van Winkle Survey. Atlantic Oil Production Co.'s No. 12 W. T. Burnside on F. W. Johnson Survey; No. 13 W. T. Burnside on F. W. Johnson Survey; No. 14 W. T. Burnside on F. W. Johnson Survey; No. 15 W. T. Burnside on F. W. Johnson Survey. Hawkeye Petroleum Co.'s No. 3 W. Smith on J. S. Caruthers Survey. Humble Oil and Refining Co.'s No. 11 W. R. Hughes on Dolores Sanches Survey.

Navarro Oil Co.'s No. 3 E. G. Greene on M. Van Winkle Survey. Blue Star Oil Co.'s No. 6-A Sabine River on G. F. Penn Survey; No. 6-B Sabine River on G. F. Penn Survey; No. 6-H Sabine River on J. Armendaris Survey; No. 6-I Sabine River on J. Armendaris Survey; No. 6-P Sabine River on L. B. Outlaw Survey; No. 6-Q Sabine River on L. B. Outlaw Survey; No. 7-A Sabine River on L. B. Outlaw Survey; No. 7-C Sabine River on L. B. Outlaw Survey; No. 7-G Sabine River on F. W. Johnson Survey; No. 7-J Sabine River on F. W. Johnson Survey; No. 7-K Sabine River on F. W. Johnson Survey.

F. C. Jones' No. 1 C. L. Taylor on Castleberry Survey. J. G. Beard's No. 3 E. Muckelroy on W. P. Chisum Survey. Rhoads Drilling Co.'s No. 1 Sabine River on A. Cormack Survey. A. C. Allen's No. 1 W. Smith on J. S. Caruthers Survey. Mead Oil Co.'s No. 1 I.&G.N. on M. Van Winkle Survey; No. 2 I.&G.N. on M. Van Winkle Survey; No. 3 I.&G.N. on M. Van Winkle Survey. Atlantic Oil Production Co.'s No. 6 W. M. Anderson on John Ruddle Survey. Sinclair-Prairie Oil Co.'s No. 12 S. G. Andrews on J. G. Walker Survey.

Shell Petroleum Co.'s No. 5 N. Jobe on P. W. Warraner Survey. Humble Oil & Refining Co.'s No. 1 W. C. Mackey on H. F. Rogers Survey. Empire Gas & Fuel Co.'s No. 5 J. W. Akin on W. H. Castleberry Survey. Selby Oil & Gas Co.'s No. 4 A. Miller on H. Brown Survey. F. P. Hynes' No. 2 D. Hilburn on W. P. Chisum Survey. Gulf Production Co.'s No. 2 C. L. Still on John Wilkinson Survey. Stanolind Oil & Gas Co.'s No. 2 E. L. Walker on John Tate Survey.

Rusk County

Webb Petroleum Co.'s No. 1 M. R. Terrell on W. R. Cook Survey. Humble Oil & Refining Co.'s No. 5 L. Holt on J. M. Barton Survey; No. 14 W. L. Price on J. M. Scott Survey. Sinclair-Prairie Oil Co.'s No. 13 D. Ledbetter on T. M. White Survey; No. 1 D. Ledbetter on W. D. Porter Survey. A. B. Edwards' No. 1 E. L. Pinkston on M. J. Pru Survey. Johnson & Rogers' No. 4 C. W. Mullins on F. Cordova Survey. Stanolind Oil & Gas Co.'s No. 4 E. Christian on W. R. Cooke Survey. Gulf Production Co.'s No. 7 T. B. Cashen on S. P. Hollingsworth Survey; No. 10 C. E. Christian on J. C. Snow Survey.

American Liberty Oil Co.'s No. 8 R. W. Fair on M. J. Pru Survey. S. Brachman's No. 2 W. O. Alford on F. Cordova Survey. The Texas Company's No. 7 L. J. Pinkston on J. B. Cadena Survey. Nat Hunter Production Co.'s No. 2 G. Thompson on Hobson, Wynn, Y'Barbo Survey. Jackson, Wise & Snedden's No. 5 J. B. Wilson on M. J. Pru Survey. DeArman Producing Co.'s No. 2 L. P. Thrash on F. Cordova Survey. Humble Oil & Refining Co.'s No. 5 M. D. Caldwell on T. J. Martin Survey. Sun Oil Co.'s No. 2 A. A. King on P. W. Holmes Survey. Arrow Refining Co.'s No. 2 E. S. Thrash on F. Cordova Survey. Blackwell Oil & Gas Co.'s No. 7 W. P. Moore on M. J. Pru Survey. Spandsco Oil & Realty Co.'s No. 4 W. P. Brett on M. J. Pru Survey.

Humble Oil & Refining Co.'s No. 2 J. E. Arnold on T. H. Smith Survey; No. 7 J. E. Arnold on F. Cordova Survey. Duncan & Holt's No. 4 R. A. Motley on F. Cordova Survey. The Texas Company's No. 8 L. J. Pinkston on J. B. Cadena Survey. Cypress Oil Corp.'s No. 1 R. A. Motley on F. Cordova Survey.

Smith County

Gulf Production Co.'s No. 6 S. B. Stone on D. W. Campbell Survey. Lucas & Hobbs' No. 2 L. S. Sartain on James Jordan Survey. Sinclair-Prairie Oil Co.'s No. 5 E. E. Moore on J. Vargas Survey. Sun Oil Co.'s No. 5 E. O. Henson on J. Vargas Survey.

Upshur County

Gibson Oil Corp.'s No. 3 W. F. Smith on J. M. Pineda Survey. Steen Drilling Co.'s No. 1 A. R. Loden on G. W. Hooper Survey; No. 2 A. R. Loden on G. W. Hooper Survey. Humble Oil & Refining Co.'s No. 3 E. W. Smith on H. H. Edwards Survey. Everitt Oil Co.'s No. 4 T. J. Sanders on T. Allen Survey. Peckham Oil Co.'s No. 3 T. Wells on G. W. Hooper Survey; No. 2 J. B. Webb on G. W. Hooper Survey. Stanolind Oil & Gas Co.'s No. 10 J. J. Flewellen on M. Mann Survey. Simms Oil Co.'s No. 10 W. R. Nicholson on M. Mann Survey. Sun Oil Co.'s No. 6 John Hargraves on M. Mann Survey.

Wildcat Operations in West Texas

(Continued from Preceding Page)

L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. ... Location.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 2s, T.&P. Sur. ... Drlg. by bit 2,153 ft.
H. F. Wurts' No. 1 E. A. Ibbotson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. ... S.D. 3,605 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.P. No. 7,347 ... S.D. 2,760 ft.

FISHER COUNTY

Condor Petroleum Co.'s No. 1 Steele, 660 ft. from S and 330 ft. from W of W half of SE Sec. 210, B.B.B.&C. Ry. Sur. ... T.D. 2,934 ft.; testing.
Cranfill & Reynolds' No. 1 George, 400 ft. from N and 330 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur. ... Drlg. 5,765 ft.
Sinclair-Prairie's No. 2 Steele, 250 ft. from N and W of NE Sec. 72, H.T.&B. Sur. ... T.D. 3,242 ft.; swabbed 65 bbls. in 4 hrs.
Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. ... T.D. 1,200 ft.; underreaming 10-in. csg.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G ... Drlg. 1,670 ft.

GLASSCOCK COUNTY

B. C. Mann's No. 1 Moore, C NE, Sec. 11, Blk. 35, Twp. 3s, T.&P. Sur. ... Location.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N. 1,884 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. ... S.D. 185 ft.
Amerada Pet. Corp.'s No. 4 Coffee, 1,300 ft. from N and 1,650 ft. from W, Sec. 32, Blk. 33, Twp. 2s, T.&P. Sur. ... Drlg. 1,775 ft.
Amerada Pet. Corp.'s No. 5 Coffee, 2,310 ft. from N and 1,650 ft. from W, Sec. 32, Blk. 33 ... Rig.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ... Spudded and S.D.
Merrick & Lamb's No. 4 Chalk, 1,650 ft. from N and 990 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur. ... Drlg. 750 ft.
Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ... S.D. 1,030 ft.
Sinclair-Prairie Oil Co.'s No. 2 Dodge, 2,313 ft. from S and 300 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ... T.D. 2,794 ft.; cleaning out.
Sinclair-Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. ... Location.

IRION COUNTY

Apollo Oil Co.'s No. 4 Nutt, 594 ft. from N and 1,562 ft. from W of Subd. No. 6, Gonzales County Schoo. Land ... T.P. 1,462 ft.; T.D. 1,467 ft.; filled 400 ft. with oil in 12 hrs.
Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W, Sec. 3,031, Blk. 28, H.&T.C. Sur. ... S.D. 7,543 ft.
Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ... S.D. 7,420 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ... S.D. 1,005 ft.; temp. abnd.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ... Spudded and S.D.
J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E. I. Miley Sur. ... Drlg. 2,075 ft.
Robert Oil Co.'s No. 1 Swann, 2,350 ft. from W and 2,920 ft. from S. I. Miley Sur. ... Drlg. 2,015 ft.
Smart & Reynolds' No. 1 Reynolds, 3,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3. ... S.D. 175 ft.
Southern Oil Co.'s No. 1 Sears, 300 ft. from S and W J. H. Grayson Sur. ... S.D. 560 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ... S.D. 1,751 ft.
Transcontinental Prod. Co.'s No. 1 Rust, 5,800 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 ... Spudded.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ... Location.

LOVING COUNTY

Covey et al's No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ... S.D. 1,300 ft.
Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S, Sec. 46, Blk. 58, T.&P. Sur. ... S.D. 810 ft.
Fair Lawn Syndicate's No. 1 Brookfield, 330 ft. from N and W, Sec. 30, Blk. 29, P.S.L. ... S.D. 2,635 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ... Drlg. 870 ft.
Lewis & Siegel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur. ... S.D. 2,280 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ... Rig.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ... Spudded and S.D.
Pennant et al's No. 1 Martin, 990 ft. from NW and SW, Sec. 66, Blk. 1, W.&N.W. Sur. ... T.D. 4,388 ft.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ... S.D. 2,600 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 133, E.L.&R.R. Sur. ... S.D. 2,860 ft.

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 16, H.&G.N. Sur. ... Rigging up machine.
Aero Gas & Royalty Co.'s No. 3 Byrne, 1,470 ft. from NW and 1,500 ft. from SW, Sec. 54, Blk. 10, H.&G.W. Sur. ... Drlg. 300 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ... Location.
Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. ... S.D. 1,395 ft.; T.P. 1,356 ft.
New State Oil Co.'s No. 1 Tippett, 1,349 ft. from S and 330 ft. from E, Sec. 40, Blk. 194, G.C.&S.F. Sur. ... Standing cmtd.; T.D. 350 ft

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,000 ft. from E, Sec. 13, Blk. 2 ... T.D. 8,367 ft.; drlg. on tools 7,979 ft.
Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ... Drlg. 5,940 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ... Drlg. 4,400 ft.

REEVES COUNTY

P. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. ... Drlg. 1,450 ft.
Southern Star Oil Co.'s No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassel's Sur. ... S.D. 250 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,368 ft. from N and 660 ft. from W, Sec. 22, N. Travis Sur. ... S.D. 2,213 ft.
Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Hall Sur. No. 519 ... S.O. 2,417-20 ft.; S.D. 3,600 ft.

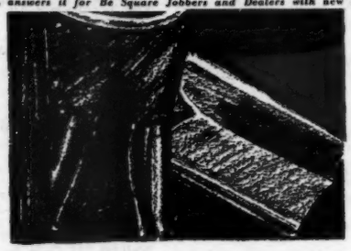
SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ... T.D. 5,410 ft.; fishing.

Does "five gallons please"

... measure your business

The BARNSDALL 3 to 5 Year Plan of Lubrication asks the question
BARNSDALL answers it for Be Square Jobbers and Dealers with new extra profits



... it does not with a Be Square jobber

Selling gasoline is like selling sugar in a grocery store —you have to supply the motorist, but when you sell him motor oil and a greasing job, and encourage him to look over your stock of tires, and other necessary accessories, you make a gasoline sale a step forward to greater profits. This is the back-bone of Barnsdall merchandising now intensively reaching motorists everywhere in the Barnsdall territory and influencing them to *look for the emblem* of the Blue Be Square as the sign of a dependable place to stop, where he can have *all* his wants quickly and satisfactorily taken care of.... Will you be one of these progressive jobbers who will display the Barnsdall emblem this summer? ... *Motorists everywhere will be looking for it!*

BARNSDALL Stabilized Motor Oils
meet the most severe test of motoring and driving conditions, regardless of temperature changes. Dependable, their constant use with correct changes at periodic intervals insures maximum motor life.

SUPER-GAS ETHYL
The luxurious motor fuel of extra power for acceleration in traffic . . . mileage on the highway . . . and power for the hills.

BE SQUARE GASOLINE
The standard grade gasoline unmatched among motor fuels for dependable uniform power. Quality grade at the regular price.

BARNSDALL Greases are specially designed for their specific use. This particular branch of the Petroleum Industry requires a rare combination of technical and practical training in order to produce a highly finished product of uniform quality. In the making BE SQUARE Greases are thoroughly checked and tested and only the most highly refined oils and fats are used.

KEROSENES — 41, 43, 42-44 Gravity. Refined to a higher grade than the most exacting State specifications.

NAPHTHAS & SOLVENTS
Refined to meet the most exacting specifications for all grades.

INSECTICIDES
Barnsdall Non-Poisonous Plant Spray, a Pyrethrum product—Concentrated Cattle spray, saves one-third of the cost—Fly Killer, a nonpoisonous product—Mothene nonpoisonous moth killer.

TIRES AND TUBES
There is but one grade of Barnsdall Tires and Tubes, all Standard First Class Quality, sold at a popular price, triple tested and with an iron-clad guarantee that protects the purchaser. You don't take chances with a Barnsdall tire or tube, identified by the Blue BE SQUARE.

Barnsdall

The World's FIRST Refiner

Refineries: BARNSDALL, OKMULGEE, WICHITA

Sales Offices: TULSA, CHICAGO, NEW YORK, ST. LOUIS, KANSAS CITY, MILWAUKEE, OMAHA, COUNCIL BLUFFS, TOLEDO, ST. PAUL, MINNEAPOLIS, LOS ANGELES, SAN FRANCISCO

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... S.D. 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 3, H.&T.C. Sub. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... Drlg. 1,370 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 69, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 152, Blk. 97, H.&T.C. Sur. ..... S.D. 4,875 ft.

TAYLOR COUNTY

Dunigan et al's No. 2 Hunter, 2,337 ft. from N and 2,567 ft. from E of Sec. 27, W. R. Wills Sur. No. 122. .. Fishing 1,790 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 36, Blk. 161, G.C.&S.F. Sur.. S.D. 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... Drlg. 2,305 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 735 ft
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur.... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Farley et al's No. 3 Lane, 1,650 ft. from S and 330 ft. from W, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Drlg. 775 ft.
Hope Pet. Co.'s No. 3 Lane, 2,310 ft. from N, Sec. 36, Blk. 1, M.K.&T. Sur. ..... Machine.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. ... S.D. 400 ft.
Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... S.D. 5,360 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 1,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,270 ft.
Abell Bros.' No. 2 Smith, 2,310 ft. from SE and 2,020 ft. from NE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 625 ft.
Abell Bros.' No. 3 Smith, 2,310 ft. from NE and NW, Sec. 4 ..... Setting 6⅝-in. csg. 2,190 ft.
Barnsdall Oil Co.'s No. 2 Henry, 990 ft. from SE and 330 ft. from NE, Sec. 28, Blk. B-29, P.S.L. Sur. ..... Location.
Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 26, H.&T.C. Sur., Blk. ..... T.D. 2,170 ft.; cleaning out.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... Rigging up machine.
Eastland Oil Co.'s No. 1 Green, 2,364 ft. from NW and 2,310 ft. from SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 930 ft.
Eastland Oil Co.'s No. 2 Weiss, 1,728 ft. from SW and 2,365 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Location.
Eppenauer's No. 1 Purcell, 865 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Prod. Co.'s No. 11 Hutchings, 330 ft. from N and 990 ft. from W of 370 acres in S half Sec. 5, Blk. F .. Cleaning out 2,782 ft.
Gulf Production Co.'s No. 23 O'Brien, 1,100 ft. from N and 330 ft. from E, Sec. 16, Blk. F, G.M.M.B.&A. Sur. ..... Rigging up cable tools.
Laydecker et al's No. 1 Bennett, 2,310 ft. from NW and NE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... T.D. 2,601 ft.; plugged back to 2,589 ft.
Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 12, Blk. 14, H.&T.C. Cur. ..... S.D. 2,445 ft.
Moran & Burkhart's No. 2 J. T. Sweatt et al, 2,310 ft. from SW, Sec. 1, J. Howe Sur. ..... Drlg. 2,252 ft.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW, Sec. 1, J. Howe Sur. ..... Drlg. 1,874 ft.
Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 570 ft.
Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 24, W.&N.W.R.R. Sur., Blk. 1 ..... Drlg. 2,820 ft.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... Location.
Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 16 ..... Underreaming csg.: T.D. 1,805 ft.
Rixford et al's No. 1 Green, 330 ft. from NW and SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... T.D. 2,454 ft.
T. P. Coal & Oil Co.'s No. 4 James, 330 ft. from NE and 2,365 ft. from SE, Sec. 5, Blk. 34, H.&T.C. Sur. ..... Location.
Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 910 ft.
White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 3, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Adams et al's No. 1 Scarborough, 660 ft. from N and E Sec. 1, Blk. 77, P.S.L. ..... Shut in 3,175 ft.
Sid Richardson et al's No. 1 Scarborough, 1,650 ft. from N and W, Sec. 1, Blk. 77, P.S.L. Sur. ..... Location.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... Location.

Wildcat Operations in Texas Panhandle

Week Ending July 11

CARSON COUNTY

Company, well, farm name, section and block— Remarks:

Danciger's No. 4 Byrum, 330 ft. from N and E, Sec. 188, Blk. 3, I.&G.N. Sur. ..... Cellar.
R. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E. Sec. 5, Blk. 9, I.&G.N. Sur. ..... Location.
Pulse-Shell Pet. Corp.'s No. 1 Byrum, 330 ft. from N and W, W½ NE, Sec. 188, Blk. 3, I.&G.N. Sur. .... Drlg. 3,200 ft.
Skelly Oil Co.'s No. 11 East Schaffer, 440 ft. from N, 2,640 ft. from E, Sec. 189, Blk. 3, I.&G.N. Sur. ..... Fishing 930 ft.
Skelly Oil Co.'s No. 18 West Schaffer, Blk. 4, Sec. 87, I.&G.N. Sur. ..... Running 6-in. csg. 2,982 ft.
Skelly Oil Co.'s No. 11 East Schaffer, 440 ft. from N, 2,640 ft. from E S half, Sec. 189, Blk. 3, I.&G.N. Sur.. Rig.
Texoma Nat. Gas Co.'s No. 1-T, 2,640 ft from N line, 793 ft. from W line, Sec. 21, Blk. 7, I.&G.N. Sur..... Cellar.
Texoma Nat. Gas Co.'s No. 1-O Dower, 2,430 ft. from N, 2,645 ft. from W, Sec. 74, Blk. 4, I.&G.N. Sur. ..... Drlg. 1,950 ft.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur. ..... Fishing 2,508 ft.
Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 16, H.&G.N. Sur. ..... Rigged up.
Kates et al's No. 1 Hickman, center NE, Sec. 42, Blk. 10, H.&G.N. Sur. ..... Spud.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Puersil, 330 ft. from N, 1,320 ft. from E, Sec. 40, Blk. B, John H. Stevens Sur. ..... Spud.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 13-3n-2e ..... Drlg. 590 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 146, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.
Bell O. & G. Co.'s No. 1 Tedesco-Webb, 330 ft. from S and E, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Bldg. rig.
Beyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 1,650 ft.
Danciger O. & R. Co.'s No. 3 Williams, 150 ft. from N, 1,650 ft. from W S half NW, Sec. 7, Blk. 1, A.C.H.& B. Sur. ..... Drlg. 1,625 ft.
Elber Corp.'s No. 1 Sethings, 330 ft. from S and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ..... Straighten hole; small show oil 2,615 ft.
Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec. of Blk. 26, H. &G.N. Sur. ..... S.D. 2,900 ft.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. 2-B, H.&G.N. Sur. ..... S.D. 3,076 ft.
Jewel Oil Co.'s No. 1 Meera, 330 ft. from S and W, NW SW, Sec. 104, Blk. 3, I.&G.N. Sur. ..... Fishing 3,325 ft.
Masda-Shell's No. 2 Worley Reynolds, 660 ft. from S and E of NE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,660 ft.
Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ..... Fishing 2,635 ft.
Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur. ..... T.D. 2,613 ft.; 500 ft. oil in hole.
Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... Drlg. 1,975 ft.
Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... Location.
Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E. Sec. 173, Blk. 3, I.&G.N. Sur. ..... Cmtd. csg. 2,562 ft.
Pulse-Shell's No. 1 Brown, 990 ft. from N, 250 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur. ..... Rig.
Saulsbury et al's No. 1 Davidson, 330 ft. from S and W, Sec. 37, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,043 ft.; estm. 150 bbls. per day.
Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 126, Blk. 3, I.&G.N. Sur. ..... Will plug back to 3,275 ft. and shoot.
Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Location.
Tedesco Oil Co.'s No. 3 Morse, 330 ft. from N and E of NE SW, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Drlg. 2,405 ft.
The Texas Co.'s No. 4 Bull, 1,65 ft. from S, 330 ft. from W, Sec. 2, Blk. B-2, H.&G.N. Sur. ..... Rigging up rig.
The Texas Co.'s No. 4 Davis (old well drilled deeper), Blk. 1, Sec. 8, A.C.H.&B. Sur. ..... Cellar.
The Texas Co.'s No. 5-B McLarty & Lester, 990 ft. from N line, 950 ft from W line, Sec. 2, B.&B. Sur. ..... Rigging up.
The Texas Co.'s No. 7 Bowers, 990 ft. from S line, 330 ft. from W line, Sec 89, Blk. B-2, H.&G.N. Sur..... Old T.D. 3,035 ft.
The Texas Co.'s No. 10 Cook-Faulkner, 330 ft. from S, 1,605 ft. from W, Sec. 29, Blk. B-2, H.&G.N. Sur..... Drlg. by lost tools 2,445 ft.
The Texas Co.'s No. 10 Williams, 150 ft. from S, 1,650 ft. from W, Sec. 7, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,000 ft.
Thorp et al's No. 1 Short, 330 ft. from N and E, Sec. 2, Blk. 1, H.&G.N. Sur. ..... Drlg. 200 ft.
Tripplehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... Rig up standard tools.
Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Rig on ground.
Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... Shut down.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ..... To deepen old well; T.D. 5,055 ft.; rigging up.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 3,080 ft.; estm. 5 or 10 bbls.; may plug.
Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 31, Blk. 46, H.&T.C. Sur. ... S.D. 450 ft.
Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur..... Pulled in rig 2,946 ft.
Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur. ..... Drlg. 2,865 ft.
Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... Plugged back to 3,146 ft.; S.D.
Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 660 ft. from E, Sec. 34, Blk. M-23, T.C.R.R. Sur. ..... Rig.
Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.
Rock Creek Oil Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... Location.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 196, H.&T.C. Sur. ..... T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... S.D. 240 ft.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Rig up.
Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 121, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur. ..... Drlg. 2,340 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .... Rig.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNI, Sec. 20, Blk. S, G.C.&S.F. Sur. ..... Drlg. 3,800 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Cmtd. cave 4,090 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-3, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... Moving in tools to test; T.D. 2,760 ft.

Guardsmen Put Stop to Illicit Oil Production; New Oklahoma City Proration Board

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

Oklahoma's production shows a substantial increase in the first full week in July, when the daily average was approximately 423,500 bbls. for the week ending July 9, which is an increase of 37,000 bbls. over the previous week.

With national guardsmen patrolling the Oklahoma City Field and keeping a complete check on every barrel of oil produced and transported during the last two weeks, under the direction of Lieut. Col. Cicero I. Murray, there have been no irregularities reported and it is believed that the presence of the troops has halted the alleged illicit movements of crude.

During the past week the Marshall Oil Co. made its delayed report on the movement of its crude oil to the enforcement officials and it was found that the company was underproduced on some of its wells in the Oklahoma City Field. One of the other producing companies is said to have overproduced approximately 699,000 bbls. of oil from the field.

The new rules and regulations that have been made by the military forces have permitted a closer check on the production, pipe line shipments, tank car shipments and pick-up oil.

The status of the new proration board in the Oklahoma City Field is under discussion, since most of the operators believe the executive order is giving extensive power and duties to the board, most of which formerly was vested in the Oklahoma Corporation Commission.

Lieut. Col. Cicero I. Murray, has stated that the board will function in an advisory capacity only, just as did the operators' committee, prior to the time that Ray M. Collins was given the umpire's job in that field. In fact some of the operators opposed the removal of the committees early in the year, believing there should be liaison between the operators, the commission, and the militia, and a place where problems may be worked out, without burdening the commission with the details.

New Proration Board

During the last week operators in the Oklahoma City Field selected three members to serve on the new proration board along with Lieut. Col. Cicero I. Murray. The independent operators met and selected R. G. Rapp, of the Denver Producing & Refining Co., as their representative. E. D. Guidinger, of the Phillips Petroleum Co., was selected to represent the pipe line companies, and Wirt Franklin to represent the refiners.

There was no nomination for a proration umpire and it is believed that none will be named at this time. It is the general opinion of the operators that such an official is not needed and would be an unnecessary expense.

Governor Explains Position

At the general meeting of operators held in Oklahoma City Thursday, July 8, Governor Murray explained his act in establishing a military shut down last August, 1931, when the price of crude oil was the lowest in the State's history. He said he came to this meeting to explain this condition and to seek the cooperation of the operators in the conduct of a business which is one of the State's principal sources of revenue.

He also said that he had created a state deficit of approximately $2,000,000 by cutting down the production of oil during the three months' period, but it was done in order to stabilize the industry and put the price at a profitable figure.

The present order placing the Oklahoma City Field under martial law was, he said, occasioned by a breakdown of the proration laws of the State. When the penalty clauses were removed by the Supreme Court decision the only penalizing authority left the Corporation Commission was to fine for the contempt of orders. So the governor stated that he issued the order and took over the enforcement of proration in the Oklahoma City Field, in order to prevent the production of oil in defiance of orders.

The governor stated that he believed he had the confidence of the operators and that the representatives selected would act honestly and conscientiously.

The Oklahoma City Field ended the month of June with an overproduction of 118,926 bbls. With the decline in the demand there is little likelihood of the underage being shipped out until September. The total production for the month of June was 2,948,814 bbls., while the total oil shipped was 2,865,783 bbls.

Important Tests Delayed

The testing of two important wells in the southwestern part of the Oklahoma City Field is expected to be delayed. The Indian Territory Illuminating Oil Co.'s No. 1 Wickline, SW cor. NW, Section 26-11-3w, has a fishing job at a total depth of 6,600 feet. The bailer was lost in the hole. The 7-inch casing is landed at 6,535 feet. The other test is the same company's No. 1 Miller, NE cor. NW, Section 35-11-3w, which was bailed down and then shut down. The total depth of this test is 6,685 feet with the 7-inch casing landed at 6,601 feet. These two wells are a half a mile from the nearest production and many believe them to be on the southern edge of the Wilcox sand trend in the field.

Interest was revived in the southwestern part of the field when another large well was added to the list of completed wells. Phillips Petroleum Co.'s No. 1 Gates, SE cor. NW NE, Section 22-11-3w, made 662 bbls. of oil the first 52 minutes, with an estimated 26,000,000 feet of gas a day. At this rate the well would make approximately 16,000 bbls. a day. The oil and gas were found in Wilcox sand at 6,490-6,535 feet.

The well is a south offset to the same company's No. 1 Garber, in the same section, on an adjoining city block, which made 210 bbls. an hour for 4½ hours, and 10,300,000 feet of gas a day.

No. 1 Gates was completed by a new method by using oil as a drilling fluid during the final stages of drilling into the sand. A special gravity oil was used in lieu of water and mud after the cement plugs were drilled.

Old Wells Plugged Back

A number of old oil wells in the Oklahoma City Field have been plugged back and reconditioned, some completed in the gas horizon. Coline Oil Co.'s No. 8 Warren, SE cor. NE SW, Section 18-11-2w, on the east side of the field and one of the early wells completed in the field, was plugged back from 6,490 feet to 4,850 feet and shot with 80 quarts and again with 87 quarts and completed for 23,000,000 feet of gas a day.

Indian Territory Illuminating Oil Co.'s No. 3 Button, NW cor. SW, Section 18-11-2w, was plugged back from 6,516 feet to 5,148 feet. Casing was ripped at 5,255-75 feet and the well completed for 4,000,000 feet of gas a day. Same company's No. 3 Canfield-Button, NW cor. NE SW, Section 19-11-3w, old total depth 6,390 feet, was plugged back to 4,814 feet and shot with 40 quarts and completed for 4,000,000 feet of gas a day. Same company's No. 2 Salsman, SW cor. NW, Section 32-11-2w, was plugged back from 6,676 feet to 6,467 feet and shot with 85 quarts, making 6,500,000 feet of gas a day.

The Wilcox Case

Wilcox Oil & Gas Co. was found guilty on 18 contempt charges alleging violation of the rules and regulations covering proration in the Oklahoma City Field, and was assessed fines totaling $8,500 by the Oklahoma Corporation Commission. The company's attorney announced that an appeal was to be taken and a petition was filed with the state supreme court.

The decision came after a day and a half of hearing the case that has been through the courts for more than three months. Fines of $500 each were assessed in 12 of the charges alleging failure to make daily production reports on the company's 10 completed wells, between the period of April 7 to 18, inclusive. Similar fines were assessed on five charges for the failure to make reports on pipe line shipments for the months of October, November and December, 1931, and January and February of this year. Charges were preferred by Ray M. Collins, state umpire, at that time.

It was alleged that the company during the five months' period transported 699,000 bbls. of oil in excess of its allowables from wells owned by the company. An employe of the umpire's office testified that the company had made reports for these months, but that the totals did not correspond with the amounts charged against the firm in the shipments.

The company's wells are now shut down under orders of Lieut. Col. Cicero I. Murray, in command of the military enforcement of proration orders. He said that the wells would remain shut in until they had been released by the Corporation Commission, or until such time as the status of each is definitely fixed.

On April 6 the Corporation Commission issued a restraining order against the company moving crude oil from the field, the order being directed against the pipe line and the railroad companies.

The Wilcox Oil & Gas Co. tried to get an injunction in the state district court and failed, and an appeal was made to the state supreme court. After a few days of taking testimony, the commission dropped the charges and permitted the company to move out approximately 130,000 bbls. of crude oil from the field. The Wilcox Oil & Gas Co. also dropped its case.

Interest in Logan County

Developments indicate a revival of interest in Logan County and that the area may see a revival of drilling before the end of the year. One of the important happenings is the leasing of wildcat blocks which have been checked and rechecked several times from a geological standpoint during the last two years. The county has been one of the most active in the State in the use of geophysical instruments.

Shell Petroleum Corp.'s No. 6 McCully, NE cor. SW SE, Section 30-19-4w, in the old Roxana Pool, was drilled deeper, finding a new producing horizon for the pool. The well has created new interest by finding a showing of oil in what is believed to be the School Land sand at 6,060-97 feet, with the total depth of the well 6,150 feet. It was estimated that oil rose 100 feet in the hole, with considerable gas, which blew the tools up the hole causing a fishing job.

With the announcement that the Ramsey Petroleum Corp. had staked a location for a wildcat test on a large block of acreage 2 miles south of the Eason Oil Co.'s No. 1 Cotcha, which opened a new producing area about two years ago, but has been shut in, has added to the importance of the developments. The new location of the Ramsey Petroleum Corp. is No. 1 in the NW cor. NE, Section 10-16-4w. This company also has several other blocks of acreage in the northern part of the State on which it expects to start operations some time this year.

Old Wells Abandoned

The Oklahoma Corporation Commission reports that 129 exhausted oil and gas wells were abandoned during the month of June. Of this total 10 were west of Range 1w, in Kay, Grant, Garfield, Grady, Stephens and Caddo Counties. The others were scattered in Pawnee, Pottawatomie, Okfuskee, Lincoln, Creek, Tulsa, Washington and Rogers Counties. A considerable number of these abandoned holes were in the Cushing Field and in the shallow areas in the northeastern part of the State.

Another test is expected to be started in the Holdenville area with the announcement of a location by the Limestone Oil & Gas Co.'s No. 1 Taylor, NW cor. SW, Section 15-7-8, Hughes County. This is southwest of the same company's recently completed shallow well in the same section which made 180 bbls. the first 24 hours from sand at 1,237-45 feet.

Showing in Washita County

J. Price and J. Clark's No. 1 Dock, SW cor., Section 21-8-18w, Washita County, a wildcat test, has resumed operations at 1,770 feet where a showing of oil was found. It is expected the 8-inch casing will be landed at this depth. Another showing of oil was found at 1,650-55 feet in the test. The 10-inch casing is landed at 1,540 feet.

During the week there were four new oil wells completed in southern fields of the State with an initial production of approximately 300 bbls. One gas well was added to the total and six new locations have been made.

T. W. Medlin and others' No. 1 C. Moore, NE cor. NW, Section 11-2s-8w, Stephens County, extended the production a location to the south. The well made 75 bbls. of oil from sand at 1,995-2,004 feet. On the north offset G. L. Pace's No. 10 Houston, SE cor. SW, Section 2-2s-8w, is a rig. The two other offsets have not been staked at this time.

F. Chamberlain and others' No. 1 Parker, NE cor. NE SE SE, Section 11-2s-8w, made 10,000,000 feet of gas from sand at 1,447-1,501 feet. Meridian Oil Co.'s No. 1 Peck, SW cor. SE SW, Section 1-2s-8w, east of production in the area, is estimated at 75 bbls. a day from the pay at 1,451-60 feet. Pace's No. 3 Pitts, NE cor. SE, Section 2-2s-8w, is a 15-bbl. pumper from a total depth of 1,547 feet.

Pace's No. 12 A. Watkins, NE cor. SE NE SE, Section 21-2s-7w, was completed for 150 bbls. of oil in sand from 1,728-36 feet. Same operator's No. 14 A. Watkins, NE cor. SE, Section 21-2s-7w,

No. 1 C. Watkins, SE cor. SE SE NE, Section2 1-2s-7w, No. 4 B. Watkins, SW cor. NW NW SW, Section 22-2s 7w, No. 5 B. Watkins, NW cor. NW NW SE, Section 22-2s-7w, No. 6 B. Watkins, SW cor. SW SW NW, Section 22-2s-7w, are all locations. Same operator's No. 3 B. Watkins, NW cor. SE NW SW, Section 22-2s-7w, is a rig.

An interesting test expected to be drilled 3 miles south of the Empire Pool is E. D. Gillette and others' No. 1 Cooley, NW cor. NW SE NW, Section 17-2s-8w, which is a completed rig.

The development in the Tatums Pool in Carter County is mostly in the southwest extension area. P. Robb and others' No. 2 Burton, SW cor. NE, Section 31-1s-2w, is a new rig in the extension area. B. F. Lundy and others have made location for No. 1 McConnell, SW cor. SE SW, Section 18-1s-2w, near production in the Tatums Field.

Southern Pottawatomie

The St. Louis area in southern Pottawatomie County, which has been in the limelight with new wells, may be again the center of drilling activities. The water which was found in several of the tests has been shut off in the most southwesterly test, indicating that the trend of production may be further developed in that direction. Noble Drilling Co.'s No. 1 Lucas, NW cor., Section 2-6-4, which was drilled to a total depth of 4,275 feet, was plugged back to 4,268 feet and redrilled to 4,270 feet and has revealed no water, making 350 bbls. of oil in 24 hours.

In the same district the Magnolia Petroleum Co.'s No. 1 Martin, SE cor. NE SW, Section 34-7-4, swabbed 30 bbls. of oil from the sand at 3,500-26 feet. It is to be swabbed and tested.

In the same district H. H. Taylor and others' No. 1 Bean, SW cor. NW, found the Viola lime at 4,050-70 feet and is standardizing after landing and cementing casing.

Creek County

Johnson Oil & Refining Co.'s No. 1 Mann, SE cor. NW SE, Section 32-19-9, is a location. Curtis Oil Co.'s No. 1 Self, C SW NW, Section 22-17-10, is a machine. Slyman and Vickers' No. 1 A. Stewart, NW cor., Section 25-15-7, is a rig. Carpenter & Dowed's No. 1 Bristow, C SW NE, Section 24-18-10, was spudding. Gray Oil Co.'s No. 7 Leader, CNL NE NE, Section 3-18-11, was spudding. Elliott and others' No. 2 Beardsley, SE cor. NE SE, Section 18-19-9, was drilling at 550 feet. T. E. Mann and others' No. 1 Beardsley, C NE SE SE, Section 18-19-9, made 140 bbls. of oil after a 120-quart shot at 2,221-51 feet. Tulsa Oil Co.'s No. 2 Burrell, NW cor. NE, Section 22-19-9, was completed for 40 bbls. from the Wilcox sand at 2,768-70 feet after a 10-quart shot. Gled Oil Co.'s No. 2 Boyd, SE cor. NE NW, Section 29-19-9, found sand at 2,128-69 feet, where it made 244 bbls. after a 180-quart shot. Swift & Woods' No. 1 Harjo, SE cor. SW NW, Section 6-18-10, made 15 bbls. of oil at 1,390-1,401 feet. Ford Petroleum Co.'s No. 3 Littlehead, CWL SW SE, Section 17-17-10, was drilling at 2,000 feet. Wilcox Oil & Gas Co.'s No. 1 Johnson, SW cor. SE, Section 6-14-10, was abandoned at 3,445-3,520 feet.

Grady County

J. Anderson's No. 1 Wild, NE cor. SE SE, Section 28-3-5w, made 40 bbls. of oil from 2,503-08 feet.

Hughes County

Limestone Oil & Gas Co.'s No. 1 Chupco, NW cor. SW NW, Section 15-7-8, was spudding. Inglehart's No. 1 Grayson, SE cor. SW, Section 31-9-9, was spudding.

Pittsburg County

Nelson and Flynn's No. 1 Anderson, NE cor. SW, Section 12-7-13, is a rig.

Muskogee County

Jolly and others' No. 4 Manuel, SW cor. SE SE NE, Section 8-15-18, was abandoned at 1,604 feet. Robinson Oil Co.'s No. 4 Brown, NW cor. NE SW, Section 17-13-16, made 25 bbls. from sand at 2,111-20 feet.

Okmulgee County

Curtis Oil Co.'s No. 1 Berryhill, NE cor. NW NE, Section 17-14-13, is a machine. Hazlett and others' No. 1 Pelocke, SE cor. NE SE, Section 23-15-12, made 20 bbls. from sand at 2,148-2,216 feet. Total depth was 2,680 feet. Castleman and others' No. 6 Thomas, C SW SE, Section 23-14-14, pumped 100 bbls. from sand at 980-1,012 feet. J. H. Rebold and others' No. 1 Charles, C SW SW, Section 28-13-11, made 20 bbls. from pay at 1,910-56 feet.

Wildcat Operations in Oklahoma

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 24-8-26w	T.D. 2,344 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	Drlg. 280 ft.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft

CHEROKEE COUNTY

La Fiere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8	S.D. 1,450 ft

COMANCHE COUNTY

T. E. Bradley et al's No. 1 Pruitt, NE SW SE Sec. 8-1-9w	Drlg. 1,620 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

E. L. Jillson et al's No. 1 Starr, SE NW, Sec. 18-15-8	Drlg. 585 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

L. C. Hierek's No. 1 Roper, C SE NW Sec. 21-20-24w	Rig on ground.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 12-3-7w	Drlg 2,694 ft.
Schoonmaker et al's No. 1 Station, NW cor. 35-4-6w	S.D. 40 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w	5,000,000 ft. gas 1,455-65 ft.; T.D. 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 20-25-1	10,000,000 ft. gas 2,556-63 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cermick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w	Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-14w	Drlg. 1,220 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19	S.D. 1,542 ft.

LINCOLN COUNTY

Hilton Phillips' No. 1 Phillips, SW NW Sec. 2-14-3	Show oil and water: 6-in gas; swabbing; T.D. 5,050 ft.; P.B. to 4,055-78 ft. to cement off water.
Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5	S.D. 3,570 ft.

NOBLE COUNTY

Wents Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w	Rig.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w	S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w	S.D. 5,515 ft.

OSAGE COUNTY

Mohawk Oil Co.'s No. 1, NE cor. Sec. 10-26-9	Location.

PAWNEE COUNTY

Rockstool's No. 1 Wylie, NW NE SW Sec. 6-20-5	S.D. 1,950 ft.

PITTSBURG COUNTY

Nelson & Flynn's No. 1 Anderson, NE SW, Sec. 12-7-13	Rig.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17	Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14	Rig.
Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14	S.D. 750 ft.

PONTOTOC COUNTY

Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6	Drlg. 360 ft.
Vanderslice's No. 1 Meredith, NE SW, Sec. 17-3-4	S.D. 230 ft
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8	Drlg. 260 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4	Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w	S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w	S.D. 3,420 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 33-9-17w	Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w	Show oil 2,453-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18	S.D. 1,770 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1s	T.D. 4,720 ft.; to cement.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2s-12	S.D. 256 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10	S.D. 1,967 ft.

BRYAN COUNTY

Hughes' No. 1 Ayres, NE SW Sec. 30-7S-7	S.D. 325 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w	Location.

MARSHALL COUNTY

J. T. Hogan's No. 1 Thompson, NE NW NE, Sec. 26-7s-6	Location.
Trailkill et al's No. 1 Spence, NE NW Sec. 10-7s-6	T.D. 917 ft.; S.D.
Liggett et al's No. 1 McDuffee, SE NE Sec. 3-7s-6	Pumping 40 bbls. 805-69 ft.; comp.

McCURTAIN COUNTY

Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8s-27	Show oil 560 ft.; 630 ft., S.D.
Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25	Drlg. 2,725 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-15	S.D. 1,950 ft.

STEPHENS COUNTY

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w	Location.
George's No. 1 Ryan, NW SW NE Sec. 21-2-15	S.D. 510 ft.

Oklahoma County

Phillips Petroleum Co.'s No. 3 Mosey, SE cor. NE NW, Section 3-11-3w, was digging the cellar. Harper-Turner's No. 1 Knapp, CEL NE NW, Section 22-11-3w, is a rig. Lassen-Ritchie's No. 1 Stanley, C SE SW SE, Section 22-11-3w, is a rig on the ground. Shields Petroleum Co.'s No. 1 Thomas, SW cor. SE, Section 22-11-3w, was digging the cellar. Indian Territory Illuminating Oil Co.'s No. 2 M. K. T., CEL SE SE, Section 34-12-3w, made 2,503 bbls. in 5½ hours from sand at 6,255-6,369 feet. Kedney and others' No. 1 Seal, NW cor. SW SW, Section 2-11-3w, is a rig abandoned. Pace Petroleum Co.'s No. 1 Iowa Addition (Block 2), Section 2-11-3w, is a rig abandoned. Kessler Petroleum Co.'s No. 1 (Block 9), NW cor. SE SE, Section 3-11-3w, is a rig abandoned. Tucker and others' No. 1 Golden Lane (Block 12), NW cor. SE SE, Section 15-11-3w, abandoned rig. Anderson & Kerr and others' No. 1 Bailey, C NW SE, Section 22-11-3w, made 2,562 bbls. of oil in two hours from sand at 6,463-6,564 feet.

Okfuskee County

Steckell and others' No. 4 Likowski, CNL NW SW, Section 22-11-11, is a rig; No. 3 Likowski, CSL N half NE SW, Section 23-11-11, made 25 bbls. after a 100-quart shot at 1,625-60 feet.

Pawnee County

Stanley and Brewer's No. 1 Herringford, SE cor. NW, Section 25-21-7, is a rig.

Payne County

Wills and others' No. 1 Smith, NW cor. SE, Section 10-18-5, was abandoned at 3,520 feet.

Pontotoc County

Superior Oil Co.'s No. 7 Mauldin, NE cor. SW NW, Section 32-5-5, made 130 bbls. after a 40-quart shot at 2,475-2,536 feet. Benedum & Trees' No. 2 Burk, NW cor., Section 33-5-5, made 120 bbls. from Hunton lime at 2,105-2,305 feet.

Pottawatomie County

Gypsy Oil Co. and others' No. 1 Master, SW cor. NE, Section 25-6-4, is a rig. Watthorn and others' No. 1 Arthur, NW cor. SW, Section 24-6-3, is a location. Sinclair Prairie Oil Co.'s No. 1 Meyers, NW cor. SW SE, Section 32-7-4 (old well plugged back), made 40 bbls. at 3,954-55 feet, total depth 4,292 feet. Pure Oil Co.'s No. 1 Tucker, SE cor., Section 34-7-4, made 740 bbls. in 14 hours from pay at 4,185-4,277 feet. Amerada Petroleum Corp.'s No. 1 Mitchell, NE cor., Section 3-6-4, swabbed 985 bbls. oil and 361 bbls. water from pay at 4,288-90 feet.

Seminole County

Spears Drilling Co.'s No. 1 Phillips, NE cor. SE SW, Section 17-9-6, was drilling at 500 feet. Amerada Petroleum Corp.'s No. 5 Tiger, C W half NW SE, Section 3-8-5, was completed for 561 bbls. from pay at 4,149-68 feet; No. 6 Tiger, NW cor. SE, Section 3-8-5, made 805 bbls. after a 20-quart shot at 4,183-4,206 feet. Westheimer and Daube's No. 12 Wade, NE cor. SW NE, Section 19-5-8, was abandoned at 1,047 feet.

Tulsa County

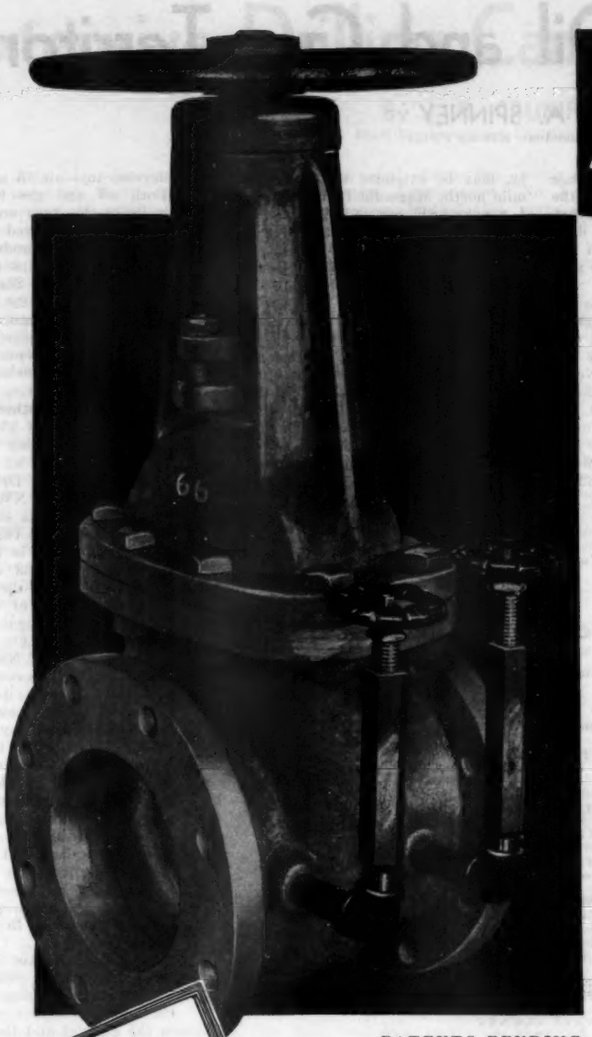
A. J. Pettis' No. 1 Taylor, SE cor. NE, Section 1-17-13, is a rig. Eppler and others' No. 4 Lumpkin, NE cor. NW NE, Section 6-17-14, is spudding.

Wagoner County

J. E. Martin's No. 2 Drew, CEL NE SW, Section 26-18-15, was spudding.

AGENCY HANDLES ACCOUNT

J. Vale Downie has resigned as advertising manager of the Keystone Driller Co. of Beaver Falls, Pa., effective July 1. The Frank Presbrey Co., general advertising agents of New York, will in the future handle all Keystone advertising, the account being in charge of Nils Bowland, vice president, with offices in the Grant Building, Pittsburgh, Pa.



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IRON *and* STEEL GATE VALVES

Central Western Kansas Continues to Develop Important New Oil and Gas Territory

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

The daily average crude oil production in Kansas for the week ending July 9, was 95,400 bbls., a decline of approximately 1,500 bbls. daily compared to the previous week.

Skelly Oil Co.'s important wildcat test in Kingman County, which found a large flow of gas in the Viola lime, was preparing to drill deeper and was mudding in the flow of gas.

Skelly Oil Co.'s No. 1 Leisman, C SE SW, Section 30-27-10w, Kingman County, was drilled deeper and increased its production to what is estimated at 30,000,000 feet of dry gas per day. This well also extends the gas producing area in the county and is attracting considerable interest. It is located about 2 miles north of the townsite of Cunningham. The well is producing from a new formation for the area. It found Viola lime at 3,920 feet, where 6-inch casing was landed. It first drilled into the formation to 3,925 feet where the well started making 13,000,000 feet of gas a day, and was deepened to 3,958 feet where it yielded the large gas production. It is believed to be third in rank among the largest gas wells in the State.

The well is located on a block of approximately 21,000 acres and is the third well drilled on the block. It is also making around 200 bbls. of oil a day from the Lansing formation, the oil being produced through the 6 and 8-inch casing and is flowing into storage. When the tools first reached the Viola lime the pressure of the gas blew the tools up in the hole breaking the drilling cable, causing a fishing job. They were finally fished out and the casing lowered to 3,920 feet and drilling resumed.

It has been the plan of the Skelly Oil Co. to drill a well to the Wilcox sand horizon to test out that formation. But the finding of this large gas production will delay the test.

No. 1 Leisman is about half a mile southwest of two oil wells on the block, both of which are flowing around 250 bbls. a day which is being shipped out in tank cars to the Skelly Oil Co.'s refinery.

Another new area is believed to have been found in Barton County when a wildcat test found oil in the Silicious lime. Mid-West Refining Co.'s No. 7 Scheufler, C SW SE, Section 9-20-11w, Barton County, found the Silicious lime at 3,304-10 feet, where oil rose 3,000 feet in the hole in a short time. This test adds another oil producing area to the county and it is located on a large block of acreage located on both sides of the river.

Agree to Proration

The operators in the Hollow area of Harvey County have agreed to a proration program which became effective July 8. The operators are working in conjunction with the Kansas Public Service Commission. The Derby Oil Co. has nominated 1,000 bbls. a day and Frank Hollow nominated 250 bbls. a day. Frank Hollow has been permitted to gather the oil and transport it to the Derby Oil Co.'s main line at Burrton, where it will be run through the Derby Oil Co.'s line to the refineries. The Skelly Oil Co. withdrew its nominations in the area, stating that its entrance was merely to accommodate other companies. Since the other purchasers have entered the field it had no desire to purchase the oil.

The Hollow well which is approximately 18,000 bbls. overproduced is the discovery well in Section 20-22-3w. The other wells underproduced 18,000 bbls., therefore Hollow has agreed to produce 100 bbls. a day until July 21, or the average is made up from his discovery well. The agreement is made for 21 days and then if the nominations remain the same all the wells will be allowed to produce 313 bbls. daily.

The other wells in the area include the Stanolind Oil & Gas Co., which is underproduced approximately 10,820 bbls. and is allowed to produce 613 bbls. a day until July 21. W. C. McBride, Inc.'s No. 1 Fressen, NW cor. SW, Section 20-22-3w, which is underproduced 6,070 bbls., is allowed to produce 397 bbls. daily until July 21. Mid-Kansas Oil & Gas Co.'s No. 1 Duerksen, NE cor. SE, Section 19-22-3w, is underproduced 1,050 bbls. and is allowed to produce 151 bbls. per day until July 21.

In the Voshell Pool

The Voshell Pool, in McPherson County, may be extended three-quarters of a mile north. Magnolia Petroleum Co.'s No. 1 Stucky, SE cor. NE NE, Section 28-20-3w, found the top of the chat at 3,017 feet and after drilling to a total depth of 3,020 feet, the casing was landed and cemented and the test shut down. It will probably be some time this week before the test can be drilled deeper into the chat formation.

If this test makes a producer in the chat it will force offsets by other companies holding leases in the vicinity. This test is located three-quarters of a mile north of the recent well completed by Slick, Pryor & Lockhart, which made 1,000 bbls. of oil from the Simpson formation.

Reno's Activity

The northeastern part of Reno County continues to be one of the active areas in the State and many believe it will develop into an oil region of importance. Both oil and gas have been found in wells in this area and if conditions were normal it is believed this would be one of the important producing areas in the State. Recent rains in the central western part of the State have made mud holes of some of the oil areas, especially on lands that do not easily drain. Trucks have had difficulty in getting around with loads and operations and development are being delayed.

Drilling activities are being resumed at Martin and others' No. 1 Yoder, C NW NW, Section 15-24-5w, a wildcat in Reno County, which has been shut down for several weeks at 320 feet.

Rose Springs Drilling Co.'s No. 1 Frantz, C NW NW, Section 2-24-4w, Reno County, was shut down on top of the chat with the casing cemented. It is believed the chat is logging favorable to make the test look attractive. It is located a mile from the nearest production, being southwest of the Olson Drilling Co.'s No. 1-B, a gas well.

Olson Drilling Co. and others' No. 1 Duckworth, C SE NE, Section 23-23-4w, Reno County, has completed the building of a lead line to its storage tanks on the lease. It was making around 15,000,000 feet of gas a day from a total depth of 3,365 feet with the gas spraying a little oil. It was estimated the well was making around 25 bbls. of oil per hour. It is the most northwesterly well in the area and extends the productioin about a half mile in that direction from the discovery well, No. 1 Blake.

Olson Drilling Co. and others' No. 1 Sabin, C SE NE, Section 24-24-4w, Reno County, was drilled into the chat enough to get a flow of 75 bbls. of oil in six hours.

A feature of this field is that no dry holes have been drilled. A number of tests are now drilling. The Olson Drilling Co. and others have completed nine wells in the district and the company is starting three others. A number of other companies are planning to drill in the immediate vicinity. Skelly Oil Co. and Gled Oil Co. plan to start tests in the near future.

In McPherson County

Another large Viola lime well was added to the Ritz-Canton Pool, in McPherson County, which is estimated at 2,400 bbls. a day. The well is F. K. Cary Oil Co.'s No. 3 Holt, SW cor. NW SE, Section 13-19-2w, on the west side of the field. The top of the Viola lime was found at 3,397-3,403 feet. When the tools were only 3 feet in the lime the well swabbed 67 bbls. of oil an hour. It was then drilled deeper and the production increased. The crew started swabbing again and it swabbed 75 bbls. of oil the first hour and 92 bbls. the second hour, and it was impossible to swab the oil column down.

The south offset to the F. K. Cary Oil Co.'s No. 3 Holt, is the Lario Oil & Gas Co.'s No. 1 Law, NW cor. NE, Section 24-19-2w, which has reached the top of the Viola lime at 3,390 feet and is landing casing and cementing before drilling deeper.

State Umpire L. R. Pickrell, advises that during the month of June the operators in three of the central western areas that have been shut in have found markets. These areas include the Stratman, in Section 16-10w, Ellsworth County, and the Ploog and Sharpe areas in Rice County.

The central western area shows an increase in its potential on July 1 over

(Continued on Page 67)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Midwest Ref. Co.'s No. 7 Scheufler, C SW SE Sec. 9-20-11w	Drlg. 3,085 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; C.O. 3,600 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Lardson, C SE NW Sec. 13-28-2	Spudding.
Ramsey's No. 1 Michael SW NW NW Sec. 18-27-3	Drlg. 1,600 ft.

CHASE COUNTY

Ryan et al's No. 1 Lipp, C SE Sec. 35-15-6	S.D. 625 ft.

DICKINSON COUNTY

Severe et al's No. 1 Lavengood, NE SW, Sec. 13-13-2	S.D. 4,752 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE, Sec. 30-24-18w	Drlg. 3,985 ft.

ELLSWORTH COUNTY

Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w	Rig.
Slick et al's No. 1 Dreford, SW NW Sec. 7-17-10w	S.D. 700 ft.
R. Gear et al No. 1 Kroboth, SE NW Sec. 12-16-10w	S.D. 50 ft.
Johnson Vickers' No. 1 Claussen, C SE NW Sec. 31-15-10w	Drlg. 3,050 ft.
R. Gear et al's No. 1 Sanberth, C SW SE, Sec. 29-16-9w	S.D. 50 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	Rig.

FINNEY COUNTY

National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-30w	Drlg. 5,140 ft.

HARVEY COUNTY

D. R. Louck's No. 1 Regier, SW SE NW, Sec. 9-23-3w	Drlg. 3,200 ft.
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1	S.D. 2,500 ft.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 26-28-10w	12-in. csg. 1,610 ft.; S.D.

McPHERSON COUNTY

Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	Drlg. 600 ft.
Detrick's No. 1 Dalke, NW SE Sec. 16-19-1	S. D. 50 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1n.	Rig on ground.
Simmons-Canary's No. 1 Krehbiel, SE NW Sec. 33-18-1w.	Drlg. 2,500 ft.

NORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 22, 34-43w	T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW, Sec. 10-17-7	S.D. 915 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15	S.O. 2,190-2,200 ft.; temp. abnd.

PHILLIPS COUNTY

Hall et al's No. 1 Donaldson, C NE NE, Sec. 25-5-18w	Fishing 3,365 ft.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hartesty, SW SE SE, Sec. 28-27-11w	Spudding.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor., Sec. 3-3-35w	S.D. 3,925 ft.

RENO COUNTY

National Union's No. 1 Hill, NE SE Sec. 18-24-4w	Location.
Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w	S.D. 318 ft.

RICE COUNTY

Langston et al's No. 1 Wells, NE SE Sec. 4-20-8w	Rig.
R. Ramsey's No. 1 Hutton, SW NE SW Sec. 6-20-9w	Drlg. 2,100 ft.
Slick et al's No. 1 Arth, SE NE Sec. 27-18-10w	Drlg. 2,500 ft.
J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w.	S.D. 50 ft.

RUSSELL COUNTY

J. Brennan's No. 1 Waly, CNL E½ NW, Sec. 29-13-11w.	Rig.

RUSH COUNTY

Skelton et al's No. 1 Brock-Hartman, SW SE NE, Sec. 4-18-16w	S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w	Drlg. 3,150 ft.

SEDGWICK COUNTY

Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1	S.D. 180 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w	H.F.W. 4,535-45 ft.; S.D

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE, Sec. 16-33-39w	S.D. 5,521 ft.

SUMNER COUNTY

Trees Oil Co.'s No. 1 Tompkins, SW, Sec. 26-33-1	Location.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6 34-2	S.D. 2,639 ft.

North Louisiana and Arkansas Wildcatters Busy; Extensive Drilling Campaign Is Planned

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 11.—Reports from various sections of North Louisiana of wildcat acreage being assembled indicate that this district will experience an extensive drilling campaign during the next few months. South Arkansas is also getting in on the play as operators are looking for new fields in these two states not yet affected by proration regulations. Assurances by the Louisiana state administration at Baton Rouge that the present severance tax on crude oil, based on gravity, will be revised in January to conform to the tax of other states in the Mid-Continent has had a stimulating effect on wildcat operations.

In Red River Parish, the Petroleum Industries, Inc., has spudded in on its No. 1 Madden, Section 21-14-10, and 10-inch surface casing has been set at 111 feet. This test is located on a 5,000-acre block situated between the Elm Grove oil and gas field in southern Bossier Parish and the old Crichton Field to the south in Red River Parish. Several small gas and oil wells are located in close proximity to the block and the surface structure indicates a good chance to pick up production in the upper Woodbine. Claiborne Parish, the home of two good oil fields and one Trinity gas field, reports much activity in wildcat areas. About midway between the Homer and Haynesville Fields, the Leue Oil Co. is arranging to deepen its No. 1 Kinder, Section 2-21-7, which was abandoned in July of last year at 3,250 feet. This company has also assembled a 7,000-acre block a few miles east of Homer and may drill this test before deepening the old well. In either case, the contract calls for a 4,500-foot hole. Four other large blocks are in the course of assembling in the vicinity of the Haynesville and Homer Fields, and another northeast of the Sugar Creek gas field will carry a contract to drill to the lower Trinity. Webster and Bienville Parishes report several large blocks being assembled but not yet completed.

Lafayette County Test

A test of more than ordinary interest will be drilled in Lafayette County, southwest Arkansas, in the near future. H. B. Langford and Earl Fox, independent operators of Shreveport, have blocked 5,000 acres centering around Section 25, Township 16s, Range 25w. The acreage is 3 miles south of the town of Lewisville and on the south side of what is known as the Humble fault. The drilling contract calls for a 3,100-foot hole, which would penetrate the Nacatoch, Blossom and Woodbine formations and carry several hundred feet into the red beds. Acreage was first blocked in the vicinity in 1928 and was carried for several years by the Magnolia Petroleum Co. without drilling a test. The fault to the north was definitely established several years previous by the Humble Oil & Refining Co. This company drilled numerous tests in the vicinity of Spirit Lake. The Bradley Field which produces from the Blossom sand around 2,900 feet, is about 18 miles south of the Langford & Fox block.

Activity in Arkansas seems to be on the incline with more than a dozen tests active, several of which recently resumed operations after being shut down for months. The Co-operative Development Co.'s No. 1 Ogles, Section 35-13-5, in Drew County, cored sandy shale from 2,351-58 feet and is now drilling at 2,376 feet. In Lincoln County, Lawrence B. Cook, trustee, has resumed activity on his No. 1 McGhee Planting Co., Section 5-8-7. The crew is fishing for drill stem at the old total depth of 2,800 feet. Southeast of Texarkana in Miller County, Fitzwater and others' No. 1 Beck, Section 33-15-26, cored sandy shale with streaks of oil sand from 2,919-26 feet, and set 6-inch casing for a test at 2,919 feet. This operator has made location for two new tests in this vicinity. His No. 1 C. J. Norsen, Section 20-15-27, has derrick up, and No. 1 E. A. McCowan is a location in Section 22-15-28. Charles Steele and Dave Lide have set 10-inch surface casing at 63 feet in their No. 1 Anderson, Section 36-12-18, in Ouachita County. Two active tests in St. Francis County are making good progress. Field & Jones' No. 1 White, Section 1-4n-2e, is drilling in shale and gumbo at 3,250 feet, and E. R. Henderson's No. 1 Britton, Section 1-4n-1e, had a show of gas from hard sand at 1,370 feet.

No New Production

No new production was brought in during the past week, the five completions all being dry holes. Four of the dusters were reported from Sabine Parish and one wildcat from Alabama. A wildcat north of the Zwolle Field, J. J. Keen's No. 1 Belton, Section 31-9-13, failed to make a producer from the chalk at 1,743 feet and was abandoned. This well was drilled to a total depth of 3,128 feet where the casing collapsed while testing a likely looking sand carrying a good show of oil and gas. As the test encountered several shows of oil in the chalk from 1,600 to 2,100 feet, the hole was plugged and a test made but with barren results. The other dry holes in Sabine were edge tests in the Zwolle area. The Service Drilling & Royalties Co.'s No. 2-A Gardner, Section 12-7-11, was dry at 2,850 feet, and the State Production Co.'s No. 1 O. D. Davis, Section 17-7-10, found the base of the chalk at 2,990 feet and was abandoned as dry at 3,102 feet. To the north of the western production, the Southland Drilling Co.'s No. 2 F. Martinez, Section 34-8-13, was dry and abandoned at 2,527 feet. The outstanding wildcat to be a failure and one that had been closely watched for the past several weeks was from Clarke County, Alabama. The Tidal Oil Co. and others' No. 1 Hobson, Section 33-6n-2e, was abandoned as dry in the Tuscaloosa at 4,533 feet. To the south of this test, in Mobile County, the Ohio Oil Co. is drilling at 2,100 feet on its No. 1 Bethel, Section 34-3s-2w. Twenty-inch surface casing was set in this well with subsurface of 13⅜-inch at 775 feet.

North Louisiana Wildcats

Of the numerous wildcats active in North Louisiana, none of them encountered anything interesting during the past week, but several are reaching depths for testing. In Beauregard Parish, the De Ridder Development Co. has set 6⅝-inch casing at 1,100 feet in its No. 1 McMahan, Section 33-2s-9w. This wildcat is located on a block of 17,000 acres and is in the vicinity of an old well drilled in 1904 which is reported to have had some likely looking sand at 1,202 feet. The Black Lake Development Co.'s No. 1 Holston, Section 17-18-6, Bienville Parish, is drilling at 1,651 feet. This test is located between salt domes near Gibsland and Arcadia and is being closely watched by a group of operators because of a good show encountered from the Nacatoch in a well drilled to the south about 2 years ago. Other North Louisiana wildcat operations follow: DeSoto Parish—J. M. Bridges' No. 1 Joiner, Section 33-11-12, set 10-inch surface casing at 98 feet; Coker and others' No. 1 Boone, Section 12-10-11, set 10-inch surface casing at 60 feet; the DeSoto Development Co.'s No. 1 Mickie, Section 7-13-12, is rigging up; S. A. Guy's No. 1 Dowling, Section 31-14-14, is drilling in shale at 2,700 feet, and E. T. Oakes' No. 1 Johnson, Section 30-13-15, is coring lime at 3,700 feet. The latter test is in the western part of DeSoto Parish near the East Texas line, and is a few miles north of the gas area in Shelby County. In Natchitoches Parish, the Saline Bayou Development Co. is rigged up and ready to spud in its No. 1 Bodcaw Lumber Co., Section 9-12-15. This is another salt dome test, and is in the vicinity of the Drake Salt Works, from which salt was mined at one time. The only other active rig in Natchitoches during the past week was H. W. Perritt's No. 2 Brown Lumber Co., Section 29-8-9, which is drilling at 2,690 feet. Two edge wells in the Zwolle area had good oil shows on test but failed to flow and are being put on standard rig to pump. Howard & Dooly's No. 1 Williams, Section 13-7-11, is standing 700 feet in oil and is the first well to be brought in in this section on the eastern edge of the field.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BEAUREGARD PARISH

Company, well, farm name, section and block—	Remarks:
DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w	Set 6⅝-in. 1,100 ft.

BIENVILLE PARISH

Blacklake Dev. Co.'s No. 1 Holstow, 600 ft. W, 100 ft. S, NE cor. SE SE, Sec. 17-18-6	Drlg. gummy shale 1,651 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	S.D. 3,620 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

DE SOTO PARISH

J. M. Bridges et al's No. 1 Joiner, 660 ft. S and E, NW cor., Sec. 33-11-12	Set 10-in. 98 ft.
Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW, Sec. 12-10-11	Set 10-in. 60 ft.
Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15	Reaming to bottom 2,295 ft.
S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE, Sec. 31-14-14	Drlg. shale 2,700 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15	Coring 3,700 ft.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12	Rigging up.
Standard Oil Co. and Pelican Nat. Gas Co.'s No. 1 Sutherlin, 320 ft. N, 260 ft. W, SE cor. SW, Sec. 19-12-14	Comp. 11,700,000 ft. gas 3,003 ft.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13	S.D. 2,403 ft; repairing rig.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,698 ft. N, 220 ft. E, SW cor. Sec.	W.O.S.R. 1,585 ft.
O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e	Derrick.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec.	S.D. 2,010 ft.; repairing rig.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11	S.D. 1,875 ft.
R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW	S.D. 1,700 ft.
H. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW, Sec. 2-8-9	S.D. for water 2,624 ft.
H. W. Perritt's No. 2 Brown Lbr. Co., 300 ft. N and W, from center Sec. 29-8-9	S.D. 2,690 ft.
Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5	Rigging up.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6	S.D. 2,504 ft.

OUACHITA PARISH

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE	S.D. 3,480 ft.

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11	Location.
Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 21-14-10	Set 10-in. 111 ft.

(Continued on Page 72)

Daily Average Runs

Due to a heavy decline in the Zwolle Field, the fields of North Louisiana and Arkansas showed a decrease of 1,455 bbls. in the daily average runs during the past week:

NORTH LOUISIANA

	Bbls.
Caddo, light	5,095
Caddo, heavy	1,905
Cotton Valley	835
DeSoto and Red River	2,010
Elm Grove	225
Haynesville	4,160
Holly	260
Homer	2,890
Pleasant Hill	285
Sarepta-Carterville	930
Urania	3,560
Zwolle	6,500
Total	28,705
Total previous week	30,190
Decrease	1,485

ARKANSAS

Champagnolle	1,800
El Dorado	3,110
Lisbon	435
Nevada	950
Smackover, light	2,900
Smackover, heavy	24,170
Stephens	710
Urbana	S.D.
Total	34,125
Total previous week	34,095
Increase	30
Total both states	62,830
Total previous week	64,285
Decrease	1,455

OIL AND GAS POOL MAP

The Oil and Gas Journal has compiled, from information furnished by its branch editorial offices throughout the United States and Canada, a large wall map showing all oil and natural gas pools in the United States and Canada.

This map, measuring 36 by 48 inches, will be printed on especially heavy bond paper.

Prices quoted for such a map by mapping companies average around $100.

The Oil and Gas Journal's map will show all oil and gas fields in color and will give the names of these fields. As an example of the completeness of the map, more than 700 pools west of the Mississippi River are shown and listed by names.

This map will be published in connection with the Semi-Annual number of The Oil and Gas Journal and will be available to subscribers only. A limited number of extra copies will be printed and these will be available at $2.00 each to supply requests for copies of the map. These requests will be filled in the order received.

There are just two ways of procuring a copy of this map. Subscribe for The Oil and Gas Journal, using the accompanying coupon, or send in $2.00. The map will be furnished without cost to subscribers on our books for the July 28 issue.

The Oil and Gas Journal
Box 1260
Tulsa, Okla.

Enclosed please find $6.00 in payment for 1-year subscription which includes the issue of July 28th with the large oil and gas map.

Name .....

Company ..... Position .....

Address ..... City ..... State .....

7-14-32

Tests, Making Good Headway at Conroe, Will Soon Determine Extent and Scope of Field

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 11.—Easy digging has enabled nearly all tests in the Conroe district of Montgomery County to make considerable hole the past week with the result that four or five of them can be expected to reach the producing horizon within the next week to 10 days, the outcome of which wells will determine to a large extent the importance and scope of the field. Drilling operations in the area already are on a major scale with 12 tests now actively drilling. During the past week definite locations were made for five additional tests while four other locations were tentatively staked. Drilling obligated by lease contracts will call for the starting up of still other tests within the next 30 days.

Theories as to the extent and trend of the field continued to be largely speculative. One major company, however, has done considerable reflection shooting and torsion galance work in the area within the past two months and has outlined a tentative picture of the district estimating the productive acreage to be in the neighborhood of 10,000 acres. This fits in pretty well with the original geophysical findings checked by Pure Oil Co. several years ago which indicated a large oblong shaped high or possible salt dome with the center some 5 to 6 miles southeast of the town of Conroe in the Ransom House Survey and running in a southeasterly-northwesterly direction.

High Well a Surprise

On the other hand, this outline has not taken into consideration several deep tests drilled west of the town of Conroe and some 6 miles from the present producing area, which tests were reported as having run high. A new slant was injected into the picture the past week when Rowe & Flowers' No. 1 Varner, just south of Conroe in the west Ransom House Survey approximately 3½ miles to the west of the present field, turned out a high well, contrary to the expectations of a large number of operators and geologists. According to the theories of many this test was located too far to the west of the supposed "high" and should have been low, but it was reported to have topped the Hockley at 4,028 feet (3,847 feet subsea), which is about on a level with the discovery wells. While lower than deep tests drilled several miles to the northwest, it is down dip from them and should find the marker lower.

Another important trade was made during the week at Conroe, in which Humble Oil & Refining Co. added very materially to its already large holdings in the district. This was the purchase of all the Eagle Oil Co.'s acreage excepting an undivided half interest which the latter company retains in one 160-acre tract. The acreage involved was an undivided half interest in the Glen B. Roseberry 160-acre tract in the A. M. Folk Survey; full ownership of the W. T. Pfaefflin estate 56.6 acres in the John Davis Survey; the W. T. Pfaefflin 110 acres in the M. W. Real Survey, and the R. L. Cartwright 248 acres in the John Davis Survey, and the remaining half interest in 798 acres of the A. A. and D. A. Madeley tract in the Ransom House Survey. The other half interest in the latter tract, which formerly was owned by L. M. Josey, was purchased by Humble Oil & Refining Co. several weeks ago. The east 63 acres of the entire Madeley tract was retained by the former owners. The Eagle Oil Co. deal just completed involved a consideration of approximately $440,000, part cash and part oil payment. Humble also is reported to have purchased approximately 125 acres in the L. A. Lang Survey and is reported negotiating for several other tracts in the district.

New Operations

Among new locations are two made by Humble Oil & Refining Co., which are No. 1 Dobbins, 425 feet from the north line and 466 feet from the west line of the C. L. Dobbins 329.6-acre tract, Ransom House Survey, and No. 4 South Texas Development Co., 1,900 feet north from southeast corner of the T. C. Howell Survey and 466 feet west at right angles. The latter is a direct west offset to Heep Oil Corp.'s No. 1 Cartwright, the second well completed in the field and which was a wet gas well at 5,078 feet, but which now is being deepened in an effort to make it an oil well. This location is on the 4,368-acre South Texas Development Co. block which Humble is purchasing from Strake Oil Corp. This is the first test to be drilled by Humble Oil & Refining Co., the first well (discovery well) having been drilled by G. W. Strake and the second and third (the latter now drilling) by Strake Oil Corp. When the Strake well, now drilling, is completed, the Strake Oil Corp. will have completed its part of the contract involved in the Humble deal, and the property will be taken over entirely by Humble Oil & Refining Co. More than 3,500 acres of the original Strake block of approximately 8,000 acres still is retained by G. W. Strake individually, the bulk of which is located adjoining to the south the Humble-Strake block.

The Bobbins location is on a tract just recently purchased by Humble Oil & Refining Co. from George Bevier and associates, which trade involved a consideration of $72,000 cash, $72,000 in oil payment, an overriding royalty and a 30-day drilling obligation with a production guarantee clause.

Moore and associates have made location for No. 1 Bruton, 660 feet out of the northeast corner of the north 46 acres in the I.&G.N. Survey, while Kraft & Gieseke have location for a second test on their block several miles southeast of the field, the second location to be No. 2 South Texas Development Co., approximately in the center of T.&N.O. Survey No. 5. The latter is approximately 2 miles to the northwest and closer to the field than the first test in Block 9, which late in the week was drilling around 4,250 feet. It is generally reported that Humble Oil & Refining Co. is negotiating for the west 120 acres in the Stewart Survey, just north of the Kraft & Gieseke block. Sun Oil Co. owns the remainder of the survey.

First Pipe Line Outlet

Navarro Oil Co. was among those companies which recently acquired acreage, this company the past week having bought the W. A. Owens west 25 acres in the John Davis Survey, 16 acres in the R. E. Dunn tract in the W. Strickland Survey, and the E. P. Brown 44-acre Survey. Actual trading generally has been inactive except for negotiations and purchases in which large companies have figured. This has resulted in some recession of the high prices which were asked following the bringing in of the second Strake and Heep wells.

The first pipe line outlet for Conroe will be provided before the close of the week with Humble Pipe Line Co. rushing completion of its 8-inch line to Satsuma, where connection is made with the company's trunk system to the coast. This company in addition to laying the 28 miles of main line pipe out of the field is engaged in laying a gathering system, connecting the Strake and Heep Oil Corp. wells. The two oil wells have been shut in pending completion of this outlet. Humble Oil & Refniing Co. also has about completed construction of a good highway down through the field and also is completing its warehouse and camp.

Salt Dome Completion

In the salt dome district of the coast, The Texas Company made an important addition to its Lake Barre Dome, in the coastal marshes of Terrebonne Parish, by the completion of No. 14 State-Lake Barre, which came in flowing 2,000 bbls. of pipe line daily from sand at 3,759-65 feet. This well is one of a series of good producers which has marked the successful development of that dome. Of particular interest concerning this well, however, is the fact that the sand was reached after drilling through an overhang of salt at 2,370-2,424 feet. The sub salt sands have proved one of the most prolific sources of production at Barbers Hill and that fact has resulted in considerable importance being attached to the development of similar production at other domes. So far Barbers Hill is the only dome where any extensive development has been done in sands underlying salt but since the discovery of the overhang there the existence of an overhang has been proved on several other domes, although no important other production has been developed. Lake Barre is one of a group of domes which The Texas Company has been developing in southern Louisiana, seven of which are in the Terrebonne Parish marshes.

At Pierce Junction, Harris County, Rio Bravo Oil Co. completed a good well in its No. 24-A Settegast, west flank, which came in flowing 25 bbls. of pipe line oil hourly through a half-inch choke from sand at 4,526 feet.

Collins & Plummer's No. 2 Collins, Augustine Viesca Survey, southern Polk County, has been abandoned as dry at 5,260 feet. This test is in what is known as the Sunshine district, where some small production has been proved in the Jackson around 3,200-50 feet. This district is located along the Jackson trend on which such fields as Conroe, Raccoon Bend and Pettus have been brought in. The Collins test, started following the Conroe discovery, has been watched closely because of the expected proving up of additional scattered pools along this trend.

Interest in Colorado County

Considerable interest is being directed at Colorado County, also in the Jackson trend and located between Raccoon Bend and Pettus, as a result of gas showings which have been encountered in Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Survey, Section 43. This well has found three separate sands showing gas, the first at 3,799-3,818 feet, the second at 3,985-93 feet, and the last at 4,021-25 feet. In the first the well tried to blow out but the gas was killed successfully and the hole deepened to the second. A drill stem test was made of this but it showed salt water. A drill stem test of

(Continued on Page 68)

Gulf Coast Fields and Wildcats

Week Ending July 9

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Grant & Baker's No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract	Drlg. gumbo 900 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Hogg et al's No. 1 Hogg, Martin Varner Sur., 1,250 ft. N and 125 ft. E of Sw cor. of Gulf, W. C. Hogg 200 ac.	Drlg. 4,705 ft.

BARBERS HILL—CHAMBERS COUNTY

R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	Lime 2,527 ft; waiting orders.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
McAlbert Oil Co.'s No. 2-B Higgens (D.D.), William Hodges Sur., 265 ft. from N line and 50 ft. from W line of tract	Old total depth 5,197 ft.; sidetracked and drlg. shale 4,045 ft.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Drlg. shale and lime 3,911 ft.
Mills Bennett Prod. Co.'s No. 3 Kirby, Henry Griffith League, 645 ft. E, 40 ft. S, NW cor. of tract	T.D. 3,589 ft.; drlg. plug to test sand showing oil.
Mills Bennett Prod. Co.'s No. 4 Means, Henry Griffith League, 150 ft. W of No. 3	Cored sandy shale showing oil 4,367-95 ft.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. rock 4,570 ft.
Sinclair Oil & Gas Co.'s No. 8 Wilburn (D.D.), Henry Griffith League	Set 109 ft. of 5-in. screen 4,962 ft.; pumping salt water.
Sun Oil Co.'s No. 3 Higgins, Wm. Hodges Sur., 50 ft. from E line of tr. and direct offset McAlbert Oil Co.'s No. 2-B Higgins	Drlg. rock 1,462 ft.
Sun Oil Co.'s No. 3 Smith (W.O.), W. D. Smith Sur.	Rig up to deepen 5,315 ft.
The Texas Company's No. 6 Wilburn (D.D.), Henry Griffith League	Packed sand 5,129 ft.; cmtd. 7-in. csg. 4,451 ft.
Texas Gulf Prod. Co.'s No. 2 Cornelia Barber, Henry Griffith League, 514 ft. W, 41.5 ft. S of NE cor. of tr.	Drlg. salt 2,495 ft.; top of salt 1,420 ft.
Texas Gulf Prod. Co.'s No. 10-H Kirby, Henry Griffith League, 30 ft. W of No. 3 Ilfrey	Cap rock 990-1,008 ft.; fishing cutters.
Texas Gulf Prod. Co.'s No. 11-H Kirby, Henry Griffith League, 150 ft. W of No. 10-H	Drlg. sand rock 647 ft.

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North Extension Tests in Government Wells Pool May Swing Field Toward New Direction

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 11.—Two tests in the north extension of the Government Wells Pool in Duval County, one of them a half mile east and three-quarters of a mile north of the Suttle discovery well, and the other midway between, got the sand the past week at about the right depth and set casing. If they make producers, as they promise to do, they will make quite an important extension to the field, especially the R. F. Byrd No. 1 R. T. Wright, which is the farthest north and east. If it makes a producer it will mean a considerable broadening out of the field and may mean that the field is going to swing to a direction contrary to the theories of some. This end of the Government Wells Field has already surprised many by its width, which was proved for a half mile, but the Byrd well will either materially widen it further or else the field at the north end must make a sharp swing to the east or northeast.

The Byrd No. 1 R. T. Wright topped the sand at 2,292 feet and set casing, with an elevation of 531 feet, and Suttle's discovery well topped the sand at 2,329 feet, with elevation of 578 feet, making Byrd's subsea minus 1,761 feet and Suttle's minus 1,751 feet. Byrd is 10 feet lower, but his sand looked like it would mean a well.

The other test is the Windsom Oil Co.'s No. 1 Cummins, which topped the sand at 2,286 feet, with elevation of 536 feet.

In the field, two good wells were completed. Magnolia Petroleum Co. completed its No. 1 J. T. Johnson, an east offset to the Suttle well. It flowed 200 bbls. in 11 hours on three-eighths-inch choke with total depth 2,331 feet. The other completion was the A. R. Anderson No. 1 Riley, with total depth 2,314 feet and casing set at 2,282 feet. On quarter-inch choke it gauged at the rate of 200 bbls. daily.

Sarnosa Pool

In the Sarnosa Pool, at the south end of the Government Wells district, Hynes & Nessly late in the week topped the sands in their No. 1 Weil in Survey 130 and set casing without making a drill stem test. This pool consists of a group of four producers, one gas and three oil, offsetting each other. Hynes & Nessly's No. 1 Weil is more than a half mile south. It got the first sand at 2,341-68 feet and the second at 2,370-98 feet. Not considering elevations, it is getting the formations at about the right depth and the core made it look like a well. It will be the first important extension to the pool.

Smith and Capps have started two other tests in Survey 576 close to the group of four producers and offsets to producers and by the close of this week each of them should be on the sand.

In the north extension to the Government Wells Pool there are several new tests starting, but mainly offsets to producers. The next well that will tell anything interesting is the Luse & Russ (Petroleum Finance Corp.) No. 1 Hahl, which is a half mile south of nearest production in the field. Late last week it was down around 1,000 feet and it too should be on the sand by the close of this week. It is the only thing drilling in that direction.

Two wildcats in the Pettus sand district are attracting attention this week. C. F. Nichols' No. 1 J. P. Harris, in Section 2 of Harris lands in Uranga Survey, Bee County, 3½ miles due south of Pettus Townsite and midway between Pettus and Normanna Fields, on drill stem test of sand at 4,090-94 feet made three joints of oil in 3½ minutes on three-eighths inch choke with 400 pounds working pressure and will set casing to complete. It has the earmarks of a new field.

Off to the southwest 25 miles, in eastern McMullen County, V. G. Schimmel's No. 1 Two Rivers Ranch Co. ran into a lot of gas at 773-85 feet, but went on through it, the objective being the Pettus sand. This test is about 2 miles northwest of the Schimmel No. 1 Hale, which made an 8,000,000-foot gas well at 370 to 400 feet. The No. 2 Hale carried to the Pettus sand at 1,500 feet was dry. It was located 300 feet south of the No. 1 Hale. There is a fault between these two and the No. 1 Two Rivers Ranch, and it should be to the Pettus sand by some time this week and return a verdict.

In the Slick Pool, Slick-Seeligson, Inc., is working with the No. 2 Allen, which has been deepened a little and is being completed. J. F. Richardson's No. 1 Virginia Taylor, 2 miles northwest of the Slick Pool and in DeWitt County, has got a water sand high. It was down 2,000 feet last week and pay in the Slick Pool is at 4,200 feet, so it too may be at sand depth by the close of the week.

Ike Howeth and associates are starting a test 5 miles southwest of the Slick Pool, and in Karnes County, which is in line with the Slick and Pettus Pools and will be another Pettus sand wildcat test that will draw some interest.

There is to be some wildcatting in southern McMullen County, though the locations are not to be announced for a week or two. This follows the general line of the Pettus sand down across McMullen County and lining up with the Government Wells Pool in Duval County.

Saxet Field

In the Corpus Christi district the Coast Pipe Line Co. is completing its 7½ miles of 6-inch pipe line from the Saxet Field to its tank farm on the turning basin at Corpus Christi, and it was expected that the entire line would be in operation this week. The company has been taking oil from some of the wells in the field and running it to another line.

Several new tests are being started this week in the Saxet Field, offsets and tests to meet lease requirements, and it is understood a test is to be drilled soon considerably north of the Saxet Field.

In western Nueces County, Camp and Stanolind completed the No. 2 King in the Second sand for around 40,000,000 to 50,000,000 feet of gas with 1,340 pounds on the tubing and 1,630 pounds on the casing, in sand at 4,010-30 feet. It was deepened only slightly after the drill stem test showed it would make a well. The King Field now consists of two gas wells, one at 3,900 feet and the other at 4,010 feet, and no dry holes. The two wells are in the center of a large block of leases held by John F. Camp and Stanolind Oil & Gas Co.

Starr County Quiet

Two wells were completed in the Rio Grande City Field in Starr County the past week. Gulf Coast Oil Co.'s No. 1 Frank Doyno, reported total depth 1,461 feet, and topped the sand at 1,442 feet, where it set casing. It bailed considerable oil, but is not flowing, and a pump is being installed. This test is a half mile north of the discovery well of that field and the first test to get production since the discovery well was completed. Sioux Oil Co.'s No. 3 Goodrich, a north offset to the discovery, No. 1 Goodrich, set casing at 1,437 feet and is estimated at 150 bbls. It is installing pump also.

The Gulf Coast Oil Co.'s No. 1 Doyno, which has had Rio Grande City on tiptoe for some days following a number of dry hole completions, now gives the new field a half mile of length. There are some other tests starting around this discovery well in other directions than those of the dry holes, and another two weeks may bring interesting information.

E. O. Connor is rigging up 1,000 feet south of the discovery well and is going to drill a deep test, much deeper than the discovery well unless he should be fortunate enough to get production at shallow depth.

Also Traylor and others have rigged up the No. 1 Laborde, 600 feet northeast of the discovery, No. 1 Goodrich, and in a direction where there have been no tests, and he too will drill deep unless he gets shallow production.

Edgar Swift has casing set at 1,436 feet in the No. 1 Frank Doyno in Lot 5, Share 77-A, which is between the Gulf Coast Oil Co.'s No. 1 Doyno and the discovery, No. 1 Goodrich.

Balcones Fault Zone

While hope was not extinguished in the new Dunlap Field in Caldwell County, there were two tests that did not look so encouraging. This field, 2½ miles northwest of the town of Luling, consists of two producers, offsets and producing from crevice. The Empire Gas & Fuel Co.'s No. 1 Walker is south of the discovery well, the Bob Rose No. 1 Pierce. Smilock Oil Co.'s (Townes & Porter) No. 1 Dunlap, a west offset to the Empire test, failed to produce at 2,395 feet. Several days' work has been put on it trying to coax it in, and the last plan was to give it a shot in the hope that it would break through into the crevice.

The Bob Rose No. 1-B Walker, a mile north of the discovery well, showed considerable oil at 1,765 feet but failed to come in, and has started drilling deeper, being at around 2,300 feet at the close of the week.

Webster Pool

In the Webster Pool, between the Dale Field and the old Luling Field in Caldwell County, Webster topped the chalk at 2,001 feet in his No. 2 McCrory. His No. 1 McCrory, the discovery well, topped the chalk at 2,008 feet and they have the same elevation. Webster is reaming down to the top of the chalk and will then rathole into the chalk.

Heavy Rains

There were heavy rains all over Southwest Texas the last week or two, amounting in many instances to floods with loss of life near rivers and streams, but none reported in oil fields. The rains caused considerable delay in field work, however.

Will Fish Some More

The McGinley Oil Corp.'s No. 1 Haby in eastern Real County, reported abandoned with a fishing job at 2,530 feet, is to be given another chance. Eugene O'Brien has been commissioned to give the matter a trial and see if he can clean the hole. If so, it will be carried to contract depth. Otherwise the rig will be skidded and a new hole started.

In western Bexar County the American Gas Co.'s No. 5 Kennon has succeeded in sidetracking the tools in the bottom of the hole and are cementing them in, and within a few days will be making new hole. This is the deepest geologically of any test in the Balcones fault, being in the Glenrose at this time. Cable tools are being used in the drilling.

Wildcat Operations in Southwest Texas

Week Ending July 9

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1	T.D. 2,980 ft.; standing.
BANDERA COUNTY	
F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 70 ft.; drlg.
BEE COUNTY	
Howeth & O'Neal's No. 1 King ranch, 660 ft. from N and W lines of Kleberg 140-acre tract in Robert Stevenson Sur.	Location.
Humble O. & R. Co.'s No. 1 Laura Thompson, 6,360 ft. from N line, 15,100 ft. from W line of tract in Garrett Roache Sur., S part of county	T.D. 6,180 ft.; abnd.
C. F. Nichols' No. 1 J. P. Harris, Durango grant east of Tuleta	T.D. 4,098 ft.; in sand, reaming to test.
Texas Gulf Producing Co.'s No. 1 Webb Hearn, 1,000 ft. N, 43 degrees E, thence 300 ft. NW at right angles from Huriburt's No. 1 Wood in P. T. Irrigation Co. Sur.	T.D. 6,089 ft.; abnd.
BEXAR COUNTY	
Amerada Petroleum Corp.'s No. 1 Peter Kiolbassa, 1,000 ft. from E line, 600 ft. from S line of 100-ac. tract, A. Mancho Sur., 4 miles SE St. Hedwig	T.D. 507 ft.; drlg.
Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 810 ft.; S.D.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 900 ft.; no report.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur.	T.D. 2,015 ft.; drlg.
Moore-Jauer's No. 1 Holly R. Ellison, 2,916 ft. from E line, 1,500 ft. from S line of farm in T. York Sur.	T.D. 2,170 ft.; whipstocking.
Jones & Volts' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenemes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio	T.D. 1,330 ft.; S.D.

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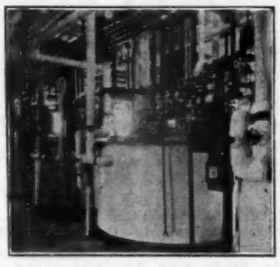

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Oil and Gas Showings in Carbon County Field; Cut Bank, Mont., Wildcat Flows 50 Barrels

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., July 11.—A new proration schedule, based on the regauging of a number of wells to establish decline curves, reduced the potential of the Hobbs Pool by 164,323 bbls. to 1,002,434 bbls. per day. The allowable outlet remains unchanged. Skelly Oil Co. and the Midwest Refining Co. made locations for one well each. California interests are starting work on a deep test on the El Vardo structure in Rio Arriba County.

Colorado had no completions or new locations and reported only routine operations.

In Wyoming the Midwest Refining Co.'s wildcat at Elk Mountain had oil and gas shows in cores from the Muddy and Dakota sand is preparing to test. One completion in the Osage Field is flowing 10 bbls. per hour, another was dry and one new location was reported. A large block to the south of that pool is to be tested. The Midwest Refining Co. and the Ohio Oil Co. are preparing to open some of the black oil wells in the Grass Creek Field. One new operation was reported in Crook County.

R. C. Tarrant's No. 1 Hogland, southwest of the gas wells in the Cut Bank Field in Montana, a wildcat, is showing for a producer and flowed 50 bbls. of 38 gravity oil in one head before being shut in for tankage. The Ohio Oil Co.'s No. 8 Caldwell, on the Dry Creek Dome, had water in the Lakota and will go deeper. The Whitlash Petroleum Co. has a small producer in the Whitlash district in an offset to the discovery well.

A third test drilled on the Barker Dome in South Dakota found water in the first objective.

A small gas well was completed in Idaho and the Ohio Oil Co.'s wildcat in Washington has a show of gas in shale.

NEW MEXICO

Lea County

A new proration schedule for the Hobbs Pool issued by Umpire C. G. Staley gives the potential capacity of the 157 producing wells as 1,002,434 bbls. per day as of July 1. This is a reduction of 164,323 bbls. daily from the potential as of June 16. The new schedule was adopted by the executive committee at a meeting at Dallas following the regauging of most of the wells. The wells with very heavy gas pressure and the wells making water on the western flank were given arbitrary ratings. The potentials heretofore in effect were based on gauges taken in January, 1931, on wells then on production and tests of wells subsequently completed. The engineers worked out production decline tables showing an average decrease in the 18 months of 13.86 per cent. The new schedule will be used as the basis for proration for the next 90 days. The allowable outlet for the field for the first half of July was placed at 29,500 bbls. daily, practically the same as the allowable for June. The Atlantic Pipe Line Co. cut its nominations 4,500 bbls. daily as of July 1, and it was expected there would be a corresponding reduction in the allowable, but the Shell Pipe Line Co. absorbed the difference and no important change took place.

Two new locations in the Hobbs Pool were reported. Skelly Oil Co.'s No. 1 Turner, 1,980 feet from the north line and 1,650 feet from the west line, Section 34-18-38, is building rig. This is an outside well in the southeastern part of the field north of the Hobbs townsite and one-fourth of a mile northeast of Midwest Refining Co.'s No. 8 Turner. Midwest Refining Co.'s No. 11 Terry, C NE SE Section 9-19-38, an inside well, is digging cellar and slush pits.

Midwest Refining Co.'s No. 26 State, C SE NE Section 9-19-38, the next completion, is drilling at 4,115 feet in lime after cementing the 8⅝-inch at 4,050 feet with 150 sacks. Top of the white lime was at 4,090 feet. Midwest's No. 29 Turner, C SE NW Section 34-18-38, cemented 10¾-inch at 2,776 feet with 400 sacks and is drilling out plug. Its No. 11 Byers, C NE NE Section 4-19-48, also a near completion, cemented 8⅝-inch at 4,050 feet.

Empire Gas & Fuel Co.'s No. 4 Hardin, NW cor. Section 19-18-38, in the northern part of the pool, has rig completed and has let contract to W. Moran.

Gypsy Oil Co.'s No. 2 Graham, NE cor. Section 24-18-37, is rigging up.

In the Eunice area, Tidal Oil Co.'s No. 1 State, C SW NE Section 8-21-36, is building rig.

In the Lea area, The Texas Company's No. 3-A State, C Lot 2, Section 2-21-33, is shut down at 1,371 and rigging rotary.

Eddy County

Leonard & Levers' No. 5 State, NE SE Section 21-17-29, Jackson area, was recompleted at a total depth of 2,280 feet after deepening from 2,242 feet. It gauged 1,200,000 feet per day initial. There was an increase of 300,000 feet per day at 2,248-53 feet. Same firm's No. 7 State, C SW SE Section 20-17-29, is drilling at 2,010 feet in anhydrite and sand. Flynn, Welch & Yates' No. 62 State, NW cor. SE Section 10-19-28, Artesia area, is drilling at 1,945 feet in lime.

The Texas Company has a crew at work in the Caprock area working out the geology in the vicinity of its No. 1 Robinson, C NE SW Section 25-16-31, with a new type of seismograph. They also have a truck equipped with a small drilling rig which drills a hole 15 to 20 feet in which the charge of dynamite is set off. The Robinson well was completed in 1927 at 3,885 feet for 8,000,000 feet of gas and 5½ bbls. of oil per day.

De Baca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE, Section 16-1s-27, Buffalo Creek, is drilling at 4,945 feet and carrying 6⅝-inch. It is reported as having a small show of oil.

San Juan County

Continental Oil Co.'s No. 24, SW NW SW Section 1-29-19, Rattlesnake Dome, has not yet been able to make a test. Total depth is 7,370 feet. The 7-inch was cemented at 6,505 feet and when the plug was drilled out it began flowing mud and water. Oil was reported coming in when the hole bridged at 6,540 feet and cleaning out is in progress at 6,640 feet.

Southern Union Gas Co.'s No. 6 Angel Peak, Lot 2, Section 11-28-11, Kutz Canon, is drilling below 900 feet.

Rio Arriba County

Pan-States Oil Co., Ltd., is reported to have let the contract to J. A. Bennet for its test on the El Vardo structure, 3 miles south of the El Vardo dam. The structure, located on the Tierra Amarillo grant, has two local highs with 500 and 600 feet of closure as reported upon by Dean E. Winchester, of Denver. The test will go to the Pennsylvanian at a probable depth of 6,000 feet. A combination rig will be used.

Bernalillo County

Norins Realty Co.'s No. 1 Pajarito grant, NW cor. NE Section 22-9n-1e, is drilling at 1,840 feet in river wash.

COLORADO

Weld-Morgan Counties

Manning & Terry and others' No. 1 Niles, C SE NE Section 13-6n-61, Greasewood district, is drilling below 4,786 feet after cementing the 9⅝-inch at 3,521 feet. It is below the Hygiene and the next important marker will be the Timpas.

Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, cemented the 9⅝-inch below the Hygiene at 3,480 feet. The Hygiene was cored and is reported to have shown a little gas.

Tulsa-Fort Morgan Petroleum Co.'s No. 1 Anthes, C NE NE Section 24-8n-59, New Raymer district, is drilling below 2,300 feet with 12½-inch cemented at 2,011 feet with 100 sacks.

Adams County

Hills Dome Oil Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, Watkins district, is standing after cementing 8¼-inch at 3,987 feet.

Washington County

C. M. Smith and others' No. 1 Middlemist, SE SW SE Section 14-4s-56, Middlemist Dome, recently taken over by new interests from Middlemist Oil Co., went back into the old hole at a total depth of 1,510 feet, cleaned out to bottom and made 30 feet of new hole. This was lost by caving and cleaning out is in progress. The 12½-inch is hanging on the spider and if it is not frozen probably will be carried to the top of the Hygiene, which is believed to be within 100 to 150 feet of bottom. Mr. Smith states the test has been financed to the Dakota, which is expected at around 4,500 feet.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE Section 7-4s-66, near Aurora, is bottomed at 6,090 feet and cleaning out cavings.

Routt County

The Texas Company's No. 4 Carstarpen-Irwin, NE NW NW Section 5-6n-86, Tow Creek, completed in December, 1930, at 3,485 feet, is preparing to deepen. Same company's No. 7 Quaintance-Hocking, NE SE Section 18-6n-86, has has cleaned to bottom at 3,640 feet and is preparing to resume drilling.

Rio Blanco County

Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance Creek, is building rig.

WYOMING

Carbon County

A wildcat which will be closely watched during the next two weeks is Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE Section 11-20s-81, on the Elk Mountain structure, 4 to 5 miles south of Simpson Ridge. It had a show of gas in the Muddy at 4,196-4,208 feet and some oil saturation in the Dakota at 4,340-65 feet. Total depth is 4,380 feet and 6¼-inch has been cemented at 4,340 feet. The test was started in September, 1930, and was drilled with cable tools to 4,020 feet when a rotary was installed. The Muddy and Dakota were cored, and while the shows of gas and oil are encouraging, the fate of the well will not be definitely known until a test is made. Cable tools are being rigged to make a test of the Dakota.

Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome, Schupback, Dane and others, is bottomed at 3,765 feet in the base of the Sundance formation, at which depth the tools were cemented off.

Natrona County

Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway Dome, is drilling at 5,400 feet, below the Frontier, and looking for the Muddy at 6,040 feet. The second Frontier was 138 feet, topped at 5,232 feet. It showed considerable gas and will be shot on the way back up in the event nothing worth while is found in the Muddy.

Jarvis & McDonald's No. 1 Government, SE cor. Section 31-30-81, Spindletop Dome, is drilling close to 1,300 feet in dry sand.

Lakota Oil & Gas Co.'s No. 5, NW NE Section 1-36-82, North Casper Creek, has cellar dug and is standing. No. 6, Section 36-36-82, had a show of gas in a stray sand at 500 feet. This was mudded off and drilling is in progress at 700 feet.

Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, cemented 8¼-inch at 1,392 feet and is drilling ahead.

Converse County

Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, Big Muddy, cemented 6¼-inch on top of the Lakota at 4,305 feet. Total depth is 4,328 feet. It is a north offset to Ohio Oil Co.'s No. 5 Jones, a producer in the Lakota. Ohio Oil Co.'s No. 25 Kinney, SE SW SE Section 4-33-76, a west offset to the Continental's well, cemented 8¼-inch below the Frontier at 3,223 feet.

Weston County

The Osage Field, the most active drilling district in Wyoming, had one good completion, one failure and one new location this week. Yellowstone Oil Co.'s No. 2, CSL NE NW Section 23-46-64, between two producers, but about on the western edge of development, found the sand at 1,872-92 feet. It was shot with 20 quarts and is flowing 10 bbls. per hour. This completion points to some good drilling still farther to the west. West Osage Oil Co.'s No. 3, SE NW SE Section 13-46-64, between the old part of the field and the new west extension, was dry and abandoned at 1,445 feet. The new operation is Wyoming-Dakota Oil Co.'s No. 1, SE SW NE Section 15-46-64, which is rigging up.

Federal Oil Co.'s No. 3, SE NE SE Section 15-46-64, is spudding, and the Riggs Oil Co.'s No. 2, SE NE Section 16-46-64, is drilling at 800 feet. General Oil Co.'s No. 1, SE SW NW Section 15-46-64, is drilling at 300 feet, and the Central Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is repairing rig. Chadron-Osage Oil Co.'s No. 17, SW NW SW Section 14-46-64, is shut down to repair machinery, and Lambie Oil Co.'s No. 8 Bock, SW cor. NW Section 14-46-64, is drilling at 1,600 feet. Carl Cundy's No. 3, NE NW NE Section 31-46-63, topped the sand at 1,362 feet and after drilling 6 feet of saturated sand, shut down to run the 6⅝-inch.

A syndicate of Osage and Newcastle operators has acquired oil and gas leases

on more than 20,000 acres south of the Osage Field and west of Newcastle and arrangements have been made with Hugh Updike and associates to test it at once. The block comprises about 11,000 acres of permits on government land, 7,000 acres of fee land and 1,920 acres of state land. The first objective will be the Muddy sand at 2,200 feet. The block was assembled by Judge E. C. Raymond, R. G. Diefenderfer and E. E. Wakeman, of Newcastle.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is drilling below 4,300 feet.

Crook County

St. Onge Oil & Gas Co.'s No 1, NE SE Section 20-53-61, a test of the Redwater structure, is spudding with a machine. The company has a block of 17,000 acres which was geologized by G. W. Knapp, of Stanton, Minn., formerly chief geologist for Gladys Belle Oil Co. The red beds are at the surface and all possible horizons will be tested at 1,550 feet. Harry F. Welch and associates, of Spearfish, S. Dak., are behind the project. The structure is 18 miles northeast of Sundance and 16 miles southwest of Spearfish.

Sheridan County

R. & D. Oil Co.'s No. 1 Mock, NW cor. SE Section 21-57-87, Smith Creek, is drilling at 1,590 feet after cutting a water sand at 1,410-20 feet.

Niobrara County

Continental Oil Co.'s No. 4 Rohlf, NW SW SW Section 32-36-65, Lance Creek, is drilling at 3,230 feet. The next objective is the Lakota.

Big Horn County

Torchlight Oil Corp.'s No. 1, Lot 8, Section 30-51-92, Torchlight Field, a deep test started in 1928, which has been standing for some time at 3,541 feet, is resuming and will go to the Madison and possibly the Amsden and Deadwood. It is believed to be bottomed in the Embar-Tensleep. A. J. Roepke, of Birmanwood, Wis., is secretary and treasurer, and G. L. Hurbutt is in charge of operations.

Producers & Refiners Corp.'s No. 3 Government, SW NW NW Section 24-56-98, Garland Dome, joint with Kinney-Coastal Oil Co., which has been shut in for some time at 4,234 feet on account of mechanical difficulties, is preparing to resume. Bids have been called for for pulling the 4¾-inch and coring to the bottom of the Madison lime. When operations were suspended in 1930 it was planned to test the Madison, which is productive in the three wells drilled to that horizon on the structure.

Washakie County

Bales Oil Trust's No. 1 Brome, NE NW Section 31-48-80, Hidden Dome, is drilling at 1,500 feet.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is bottomed at 380 feet, with 13⅜-inch cemented at 374 feet, and is drilling out plug. A shortage of water for rotary operations has delayed progress somewhat, but this has been partially overcome by the installation of a condenser to recover water from the steam.

Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, is drilling at 2,900 feet in the Carlisle shale. The Frontier is expected below 3,000 feet.

Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, Shoshoni district, is drilling at 2,000 feet.

Sweetwater County

Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, Baxter Basin, is drilling at 3,564 feet. Hidden Treasure Oil Co.'s No. 1, NE cor. NW Section 11-20-104, is resuming at 1,720 feet after being shut down for some time, and its No. 1, SW cor. Section 32-21-103, is standing at 4,234 feet.

Sublet County

California Petroleum Co.'s No. 6-1, SE cor. SW Section 34-27-113, La Barge district, was completed as an average well at 707 feet, and its No. 7-H, Lot 10, Section 3-26-113, is spudding at 40 feet.

Uinta County

Trans-Western Petroleum Co., Ltd.'s No. 1, C SE Section 6-14-118, Aspen district, has cleaned out to bottom at 4,040 feet.

MONTANA

Glacier County

The area to the southwest of the gassers in the Cut Bank Field in Glacier County came into the limelight this week when R. C. Tarrant's No. 1 Hogland, NW cor. SW Section 13-34n-6w, began making oil and gave indications of coming in as a good producer. It topped an unidentified sand at 2,848 feet and was drilled to 2,894 feet. It was still in sand when operations were suspended. The oil, which tests 38.7 degrees gravity, rose 2,200 feet in the hole. It was then connected with a 250-bbl. tank with a 2-inch flow line. After swabbing, it made a head of between 50 and 60 bbls. It was then shut in to erect more tankage. The sand is believed to be either in the bottom of the Kootenai or top of the Ellis. It is 1¾ miles south and a little east of the B. & H. Oil Co.'s No. 1 Haines, and 6 miles southwest of the nearest gasser in the area where L. B. O'Neil drilled a number of gas wells last year for the Montana Power Co. No. 1 Haines, C SE SE Section 2-34-6w, came in as a producer at 2,761-85 feet last year and was rated at 50 bbls. per day. It was not, however, a satisfactory test as the rig burned down and the tools were in the hole. No. 1 Haines is about one-half a mile to the southwest of Jerome Drumheller's No. 1 Yunck, C SE NW Section 1-34-6w, which first attracted attention to the area in 1930 when it was completed as a 5,000,000-foot gas well in the Sunburst at 2,710-23 feet after plugging back from 2,919 feet.

The Cut Bank Field is a low northwest-southeast trend structure on the western flank of the Sweetgrass arch. Before L. B. O'Neil opened up the group of gas wells, the field was looked upon as having about equal chances for producing oil or gas. The Texas Company has large holdings in the district and is drilling two wells and preparing to start a third. It is primarily interested in finding oil. Its No. 1 Peterson, SW NE SE Section 22-36-5w, near two of the O'Neil gassers, spudded on June 26 and is drilling at 298 feet. The other test being drilled by The Texas Company is to the northeast in Toole County, in its No. 1 International Land Co., C S half, SW Section 6-36-4w, which is drilling at 2,350 feet and nearing the Sunburst sand.

Milk River Petroleum Co.'s No. 1 Blackfeet, SW NE NE Section 28-36-12w, Milk River district, which was drilled to 2,956 feet in a 16-inch hole with cable tools by the Fulton interests, has completed rigging rotary and is making new hole.

Carbon County

Ohio Oil Co.'s No. 8 Margaret Caldwell, SE SW NE Section 12-7s-21, in the eastern end of the Dry Creek Field, topped the Lakota at 5,703 feet and found it water bearing. It is drilling below 3,800 feet and will go to the Sundance. The location is a little west of Carbon Oil & Gas Co.'s No. 1 Armstrong, which came in for 1,800 bbls. per day and which is recementing in an effort to shut off bottom water. No. 8 Caldwell, which cut 16 feet of the Dakota water sand, indicates either a faulted condition at that location or marks the eastern edge of the pool. Ohio Oil Co.'s No. 7 William Robinson, C SE SE Section 3-7s-21, is drilling at 5,477 feet, near the top of the Lakota, and its No. 11 Bowman, C SE NE Section 4-7s-21, is drilling at 4,640 feet in shale.

Midland Oil Syndicate's No. 1 Burger, SW cor. NW Section 24-6s-23, East Bridger, is drilling at 1,160 feet and reports a small show of oil.

Liberty County

Whitlash Petroleum Co.'s No. 1 Hicks, CWL NW NE Section 26-37-4e, Whitlash district, a west offset to the discovery well, Western Natural Gas Co.'s No. 1 Hicks, found a second sand at 1,792-1,848 feet. It about measures up to the discovery, showing some oil and a little gas in the hole. A pump is being installed to test. The discovery well has been averaging 21 bbls. per day on the pump. H. L. Postlewaite's No. 1 Hicks, C SW NE Section 26-37-4e, is drilling at 1,100 feet, and Casper Oien's No. 1 Hicks, C SE NE Section 26-37-4e, is shut down for repairs at 300 feet. A. E. Crumley's No. 1 Strode, C NW NE Section 35-37-4e, found a little saturation in the Bow Island sand at around 1,400 feet. A new location is W. D. Craig and others' No. 1 Strode, C SE NE Section 34-37-4e.

Fallon County

McDonald and others' No. 3, C SW Section 28-8n-60, Cedar Creek, is drilling at 1,760 feet after cementing 8¼-inch at 1,682 feet.

Golden Valley County

Golden Valley Oil Co.'s No. 1, SW SE Section 26-6n-22, Belmont district, is drilling at 3,360 feet.

SOUTH DAKOTA

Wy-Tex Oil & Gas Co.'s No. 1 Hamilton, Section 32-8n-1e, Oak Creek district, is fishing for tools at 1,080 feet. J. H. Voorhees and others' No. 1, SW SE SE Section 35-9n-3e, Crow Creek district, both in Butte County, spudded and shut down at 100 feet.

Barker Structure Drilling Co.'s No. 1 Adams, NE cor. SW Section 34-6s-2e, Barker Dome, Custer County, is bottomed at 1,525 feet in a water sand with shows of oil and gas. Same company's No. 1 Rockford, SE NE SE Section 28-6s-2e, had water at 1,400 feet last fall. These two wells were drilled out from the discovery, which is pumping 2 to 3 bbls. per day, to outline the structure.

Chadron-Osage Oil Co.'s No. 1 Moody, NE cor. SW Section 6-12s-6e, Fall River County, is drilling at 2,430 feet with a show of oil. It cut a dry sand at 2,365-70 feet.

UTAH

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is drilling at 5,525 feet in black lime and has had no salt below 5,350 feet. Brendell Oil & Gas Co.'s No. 1, NE NE Section 9-22-19, is drilling below 2,200 feet. Maude Ellen Oil Co.'s No. 1, NE NW SE Section 28-3s-21, Uinta County, has temporarily suspended at 2,500 feet. It had a show of oil with water in the Pennsylvanian and probably will be continued later to the Madison.

IDAHO

Boise Petroleum Co.'s No. 1 Pence, SE NE SW Section 13-8n-4w, Payette County, has resumed at 1,604 feet after repairing derrick. Interstate Finance Corp.'s No. 2, SW SE Section 12-8n-5w, Payette County, is reported to have been completed at 1,300 feet as a small gas well, and machine moved to the SW SE of the same section for No. 3. Grand Teton Oil Co.'s No. 1 Blevins, SW SE Section 33-5n-44, Teton County, is bottomed at 3,314 feet and underreaming to lower the 6¼-inch for a water shutoff in a sand topped at 3,284 feet.

WASHINGTON

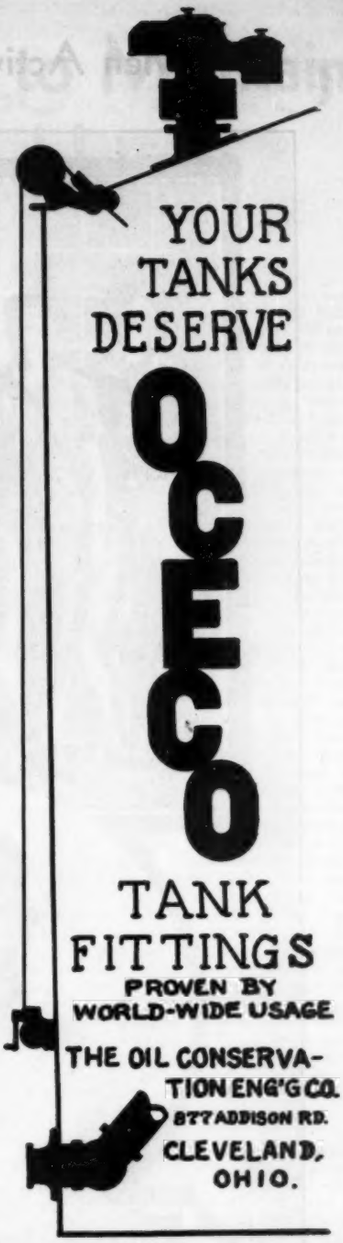
Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Gray's Harbor County, has straightened crooked hole and is coring at 2,140 feet with considerable gas showing in shale.

OREGON

Northwest Petroleum Corp.'s No. 1, Section 23-11-21, Mitchell district, Wheeler County, set the 15½-inch at around 300 feet and is drilling ahead.

WILLIAM S. WALKER DEAD

William S. Walker died suddenly at his home in Tulsa on July 6, age 63 years. Mr. Walker was assistant manager of the Jarecki Manufacturing Co.'s general office in Tulsa. He has been associated with the company 46 years, joining it in Findlay, Ohio. Mr. Walker was born in Tidioute, Pa. He is survived by Mrs. Walker and two children.



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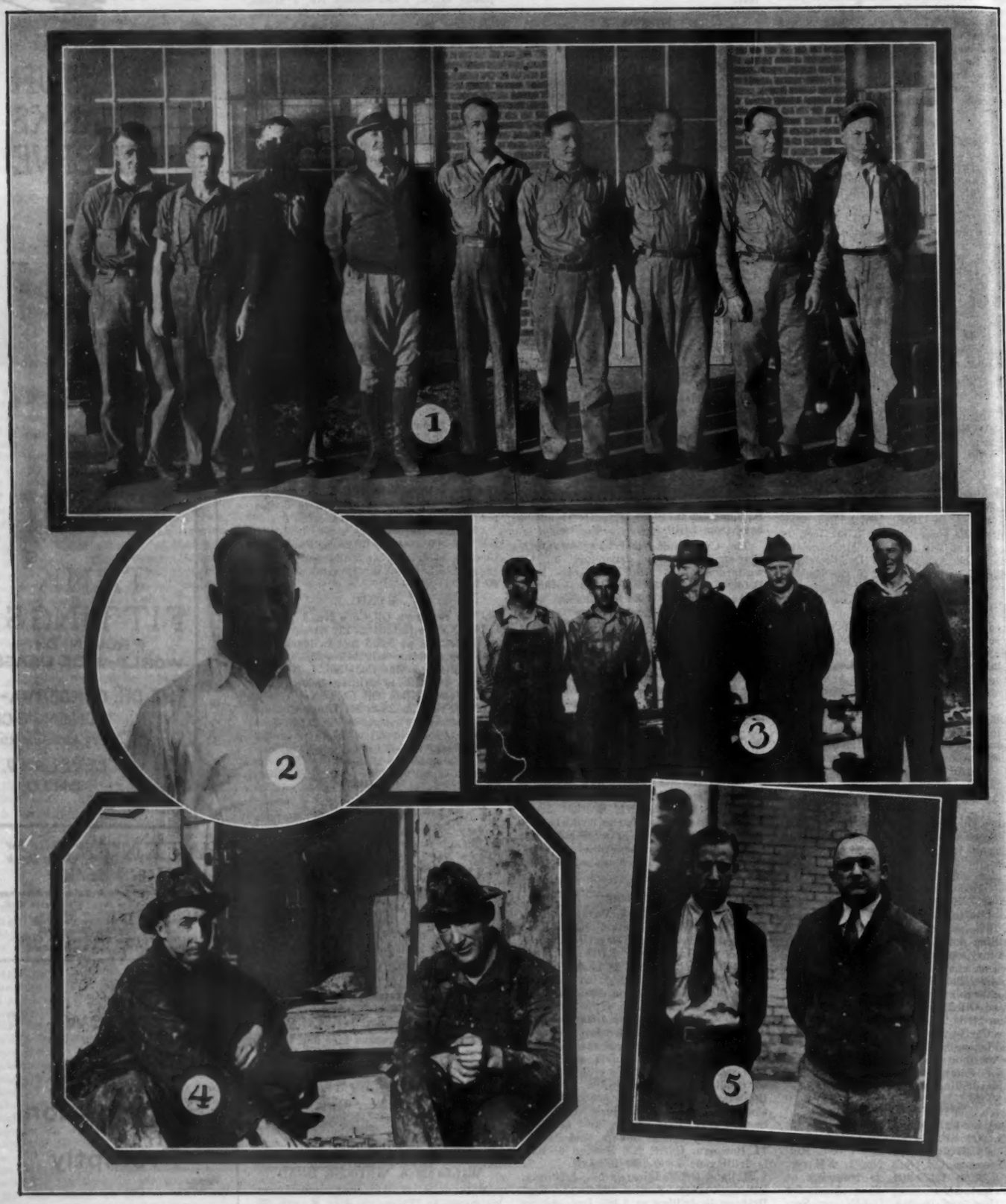


1—Left to right: J. R. King, repairman; W. C. Mcgee, fireman; B. H. King, oiler; H. Goughnour, chief engineer; W. Hawkins, engineer; C. H. Lyons, fireman; J. R. Mason, oiler; J. F. Harman, engineer, and R. Phillips, storekeeper, Northern Gas & Pipe Line Co. 2—William Koontz, superintendent, Producers Refinery, Bristow, Okla. 3—Left to right: R. E. Waggner, helper; M. E. Butlers, helper; W. Cates, tool dresser; C. O. Irwin, driller, and A. E. Bockus, helper, Reiter-Foster Oil Co., Greasewood Field, Colorado. 4—Left to right: Frank Pitts and Mont Mills, drillers, Van, Tex. 5—Left to right: W. L. Caldwell, geologist, and L. H. McBee, land department, Sun Oil Co., Tyler, Tex.

Operators in California Endeavoring to Maintain Production Within the Prescribed Limits

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 9.—Although the Standard Oil Co. did not take any official cognizance of the fact that several fields in California exceeded their maximum allowable during the first 10-day period following the recent advance in crude oil prices, Umpire Neal Anderson was instructed to correct the situation at the earliest possible date. None of the fields which showed excesses during the first 10-day period was out of line to any great extent. The West Coalinga Field showed a daily overage of 204 bbls.; Elk Hills, 160 bbls.; Kettleman North Dome, 486 bbls.; North Round Mountain, 607 bbls.; Rincon, 208 bbls.; Alamitos Heights, 80 bbls.; Huntington Beach, 121 bbls.; Long Beach, 698 bbls.; Santa Fe Springs, 145 bbls., and Whittier, 7 bbls. In some of these cases the surplus production chalked up during the first 10-day period will be eliminated by a compensating underage later in the month.

The Standard apparently recognized this condition, resulting from the policy of some operators of pumping during the early part of the month and then suspending production activities late in the month when the maximum allowable has been reached. This is particularly true in fields where operators have large leases which are placed on production every alternate week. The situation in the Long Beach and Huntington Beach Fields is a rather difficult one to understand, however, as the overage in these districts is definitely due to the failure to observe curtailment and not because of any unusual production practice. Because of this, the committees in charge of these fields are again contacting operators and endeavoring to secure compliance with proration orders in an effort to remove any possibility of jeopardizing the recently advanced price structure.

Potential Is Lower

Effective July 1, California's potential daily production was reduced from 1,018,300 bbls. to 1,014,500 bbls. A general reduction was effected throughout the State, although in a few cases the potential of fields was slightly increased. The Belridge Field was stepped up 2,860 bbls. per day, while the potential of Fruitvale was increased 1,000 bbls. The potential daily production of the Midway-Sunset area was reduced 3,730 bbls. per day; Long Beach, 500 bbls. per day; Playa Del Rey, 2,170 bbls. per day, and Santa Fe Springs, 1,850 bbls. per day. The maximum allowable daily production of the State was reduced 500 bbls. per day, declining from 476,700 bbls. to 476,200 bbls. No great change was effected in the respective allotments of the various fields throughout the State. Fruitvale was, however, increased from a permissible of 3,800 bbls. to 4,000 bbls. The Rincon Field, where operators were unable to reduce production to the original allotment of 1,100 bbls., was granted an increase of 500 bbls., due to water and sand trouble. The San Miguelito Field, due to the recent killing of the Continental Oil Co.'s No. 1 Grubb, was reduced from a daily allotment of 400 bbls. to 100 bbls.

The Western Gulf, which broke the deep drilling record for California last week, added a little more hole to its record-breaking well in the Santa Maria area of Santa Barbara County and at the close of the current week was still going ahead. This record breaker of the Western Gulf has just passed the 10,150-foot level, and, while it is still short of the world's record of 10,585 feet established in the Pantepec district of Mexico, the hole is in excellent condition and should enable the company to exceed the latter depth if it should decide to do so. The Western Gulf's Santa Maria wildcat is still in brown shale and this, together with the extreme depth already reached, renders the outlook exceedingly dubious.

The deepest well drilled in California previous to the Western Gulf's Santa Maria wildcat was the Chanslor-Canfield Midway Oil Co.'s well No. 2-A Hobson in the San Miguelito Field, which proved to be a duster at 10,030 feet. The latter project, after failing to find commercial production at this depth, was subsequently plugged back and brought in pumping approximately 150 bbls. per day. The deepest well previous to No. 2-A Hobson of the Chanslor-Canfield Midway Oil Co. was the Shell Oil Co.'s No. 1 Williams in the Semitropic area of Kern County, which was abandoned as a dry hole below 9,700 feet. There has been a definite trend toward deeper drilling in California during the past several years. It has only been a matter of a little over five years since the Chanslor-Canfield Midway Oil Co. reached what appeared to be an extreme depth at 8,201 feet. This record, which was a little over 250 feet deeper than the bit had ever penetrated before in a California field, was chalked up on April 15, 1927, when No. 96 Olinda in the Brea Olinda Field was abandoned as a dry hole. Since the establishment of this record, a number of wells have been drilled below the 9,000-foot level. Long Beach, Santa Fe Springs, Ventura Avenue, Midway-Sunset and Kettleman Hills have all been prospected below the 9,000-foot level during the past few years.

It is significant to note that in most instances these deep exploratory wells have been failures as far as commercial production is concerned. The two most recent instances are the North American Consolidated's No. 1 Blauvelt and No. 1 Elsinore in the Kettleman North Dome Field. The former well was recently abandoned as a duster at 9,500 feet, while the latter, upon the failure to come in a commercial producer at 9,578 feet, is being plugged back. Other dry holes below the 9,000-foot level include Oscar Howard's No. 7 Hathaway in the Santa Fe Springs Field at 9,356 feet; George F. Getty, Inc.'s No. 48 in the same field at 9,150 feet; No. 10-A Patterson of The Texas Company in the same field at 9,058 feet, and No. 11 Nesa of the Shell Oil Co. in the Long Beach Field at 9,280 feet. The ultimate outcome of the Standard Oil Co.'s No. 1 Mascot in the Midway-Sunset Field of Kern County has not yet been determined. Rotary equipment is being rigged up in this well for a resumption of work at 9,629 feet. The Associated Oil Co., barring the development of mechanical trouble at the last moment, will break the existing record for deep commercial production in the near future. This projected completion is No. 83 Lloyd, which a few days ago had reached a depth of 9,700 feet in the prolific Ventura Avenue Field. This project has threatened to get beyond control on several occasions and the crew was obliged to fortify the rotary drilling fluid again within the past few days. This well, if given a chance to produce its maximum upon completion, is expected to do better than 7,500 bbls. per day. The company has already taken a penetration in this deep 57 zone in excess of 1,000 feet and is consequently anticipating substantial production. It might not be amiss to mention again that no well on the apex of the Ventura Avenue anticline has drilled entirely through the productive formation.

Elwood

The Pacific Western Oil Co. successfully completed well No. 9 on State tideland permit No. 92 in the Elwood Field of Santa Barbara County during the early part of the past week. This new well, bottomed at 3,529 feet and finished with a 5⅜-inch liner carrying 35 feet of perforated, was brought in doing 123 bbls. of relatively clean 31.3 gravity oil per day. The most significant feature in connection with the completion of this well is that it is producing practically no gas from the Vaqueros formation in which this well was completed. Caroline Spalding's well No. 6 on Tideland permit No. 93, which will be drilled by the Pacific Western, will probably be spudded in some time during the next fortnight, as preliminary preparations are now well under way. In the Santa Barbara Mesa Field, the La Mesa Oil & Exploration Co. failed to complete its well No. 1 during the past week as the cement job on the water string backed up a little too high in the string of 6⅝-inch pipe. The company endeavored to drill out the cement with tubing but was unsuccessful and is now running in a string of 3-inch drill pipe. In the Santa Maria district of Santa Barbara County the Union is still endeavoring to complete No. 51 Newlove at 2,777 feet but the results to date have been rather unsatisfactory. In the Carpinteria district, The Texas Company is nearing the 4,000-foot level in its initial wildcat but the log fails to show any favorable indications up to the present time. The Coal Oil Point area, located a few miles east of the prolific Elwood Field of Santa Barbara County, has come back into the spotlight due to the resumption of work on the Bolsa Chica Oil Corp.'s tideland project and the Equity Oil & Gas Co.'s No. 1 Vivian. Off the coast of Santa Barbara County, on Santa Rosa Island, the Standard has just passed the 1,000-foot level in what may ultimately turn out to be a rather interesting test. The Barnsdall, which is drilling a wildcat in the Los Alamos section of Santa Barbara County, is nearing the 5,200-foot level in No. 1 Careaga.

Midway-Sunset

The Republic Production Co. finished well No. 35-A in the Midway-Sunset Field of Kern County during the past week and this project was brought in pumping 228 bbls. of clean 22.1 gravity oil per day. This well, bottomed at 3,187 feet and finished with a 6⅝-inch liner carrying 315 feet of perforated, was given a preliminary production test a few days before its final completion but it subsequently sanded up after coming in pumping at the rate of 180 bbls. per day. The Standard is expected to begin making new hole in No. 1 Mascot, a deep test in this field which has been standing suspended for the past year and a half at 9,629 feet. In the Fruitvale-Fairhaven district drilling operations continue to increase and indications point to an active development program during the next several months.

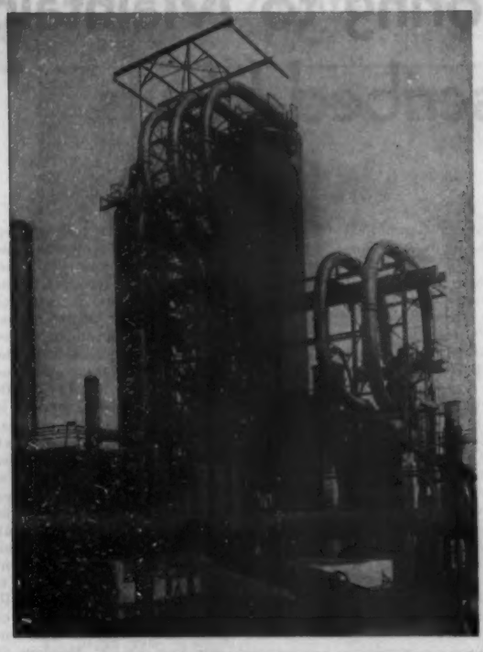
A number of operators have recently voiced the opinion that there is a strong probability of a general deepening campaign impending in the North Belridge Field of Kern County. It is rather difficult to find any basis in fact for this assumption as operators in this field are in general accord on the necessity of maintaining effective curtailment. Potentially productive acreage in this field is held by reputable operators and there does not appear any possibility of an early resumption of drilling. A similar situation exists with respect to the South Belridge Field and also at Lost Hills. The several dry holes drilled in the Lost Hills Field had a tendency for a time to indicate the absence of a deep productive horizon in that area but completion of a new well in a deep zone in the North

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	June 25, 1932		June 18, 1932			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	147,070	987,352
Gasoline	129,238	18,463	613,696	87,671	4,202,082	7,591,901
Kerosene	.....	.....	.....	.....	154,372	89,109
Foreign exports—						
Crude oil	284,409	40,630	89,948	12,850	4,490,783	3,520,030
Fuel oil	72,191	10,313	273,255	39,036	4,499,239	7,537,379
Diesel and gas oil	72,027	10,290	94,241	13,463	1,325,977	1,906,931
Gasoline	192,443	27,492	101,703	14,529	4,622,151	4,606,759
Kerosene	12,608	1,801	107,750	15,393	1,244,821	801,210
Lubricants	.....	.....	.....	.....	.....	18,978
Naphtha distillates	.....	.....	.....	.....	75,425	.....
Coastwise-domestic—						
Crude oil	271,595	38,942	176,831	25,261	6,966,205	10,659,350
Fuel oil	262,283	37,469	187,488	26,784	6,283,899	6,907,450
Diesel and gas oil	15,367	2,195	1,173	168	692,301	805,928
Gasoline	370,589	52,941	234,413	33,488	7,743,012	6,737,362
Kerosene	12,524	1,789	4,696	671	92,695	186,727
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	151,220	.....
Gasoline	61,955	8,851	.....	.....	430,185	405,469
Lubricants	.....	.....	.....	.....	15,824	21,990
Foreign exports—						
Crude oil	.....	.....	.....	.....	707,651	107,736
Fuel oil	.....	.....	.....	.....	521,659	720,901
Diesel and gas oil	.....	.....	.....	.....	352,107	294,708
Gasoline	160,013	22,859	.....	.....	1,906,274	2,184,237
Kerosene	54,670	7,810	.....	.....	546,533	440,002
Lubricants	.....	.....	.....	.....	24,934	.....
Naphtha distillates	.....	.....	.....	.....	.....	20,100
Coastwise-domestic—						
Fuel oil	.....	.....	76,543	10,935	1,441,315	2,055,457
Diesel and gas oil	.....	.....	16,511	2,359	238,094	195,112
Gasoline	111,160	15,880	131,688	18,813	1,742,215	1,757,232
Kerosene	.....	.....	.....	.....	65,756	147,990
Naphtha distillates	.....	.....	.....	.....	.....	49,780



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Belridge Field has revived interest in the possibilities of the former area. It is not likely, however, that operators holding acreage within the proven limits of the Lost Hills Field will undertake any deep zone exploration in the immediate future. As a matter of fact, this is a very inopportune time to engage in exploration work, especially in an area containing numerous diversified interests.

Conservationists interested in effecting stabilization of the oil industry on the Pacific Coast can forget the Lost Hills-Belridge area for the present as there is little likelihood of any aggressive drilling in this section. It might be well to watch Thomas Purman's exploratory work in the McKittrick area, however, as this wildcat has apparently encountered the Temblor formation and looks rather promising. The Temblor, which has been found exceptionally productive at Kettleman Hills and in the North Belridge Field, may not show similar characteristics in the Purman area, but at the same time there is no reason to believe that McKittrick should not prove likewise productive. The tests of Thomas H. Purman and the Welport Oil Co. in the McKittrick sector will bear watching during the course of work from now until the completion of drilling. Several abandonments were filed with the State Mining Bureau during the past week, included in which was the Associated Oil Co.'s No. 1 Mitchell, a wildcat located in the Jacalitos area of Fresno County. This test, located in Section 22-21-15, was abandoned as a duster at 6,197 feet. This is the deepest well to be drilled on the Jacalitos anticline up to the present time and, while it was dry, it does not necessarily condemn this entire structure. Several of the major companies, including

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status—
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	1,070	sd. sh. drilling
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	5,160	br. sh. drilling
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	10,151	deep record
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,979	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	2,402	br. sh. drilling
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	5,510	redrilling
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
The Texas Company, No. 1 Carpinteria, Santa Barbara Co.	33- 4-25	3,903	sd. sh. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	2,853	sd. sh. drilling
Miller, J. W., No. 1 Miguelito, Ventura Co.	23- 3-24	....	grading
Bell, H. E., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	....	material
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	102	sd. drilling
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,812	fish D.P.
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	1,810	hd. sd. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	suspended
Milham Expl. Co., No. 16 Buttonwillow, Kern Co.	7-28-23	515	cemented
Milham Expl. Co., No. 17 Buttonwillow, Kern Co.	17-28-23	rig	suspended
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,303	br. sh. drilling
Welport Oil Co., No. 3 McKittrick, Kern Co.	26-29-21	1,298	prod test
Welport Oil Co, No. 2 McKittrick, Kern Co.	19-29-21	350	sidetracking
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Grande, No. 1 Shale Hills, Kern Co.	7-27-19	2,711	sd sh drilling
Rio Cal Pet., No. 1 Shale Hills, Kern Co.	2-27-18	2,355	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,464	hd. sd. drilling
Pyramid Hills Oil Co, No. 1 Devils Den, Kern Co.	24-25-18	1,010	suspended
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	2,383	fishing
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	3,146	hd. sd. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	1,030	redrilling
Barnsdall Oil Co., No. 1 Tejon, Kern Co.	15-11-20	7,126	abandoned
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Descanso Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,749	suspended
Associated, No 1 Jacalitos, Fresno Co.	22-21-15	6,197	abandoned
Kingsburg Expl Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,693	redrilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	1,615	sd. sh. drilling
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-13	3,352	suspended
Martin, J. D., No. 3 Edna, San Luis Obispo Co.	5-31-13	311	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-13	1,650	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,340	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	569	sd. sh. drilling
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,342	suspended
Lacal Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	22-22-20	341	cemented
Kettleman Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	rig	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,073	suspended
Tulare Basin Gas Co., No. 2 Dudley Ridge, Kings Co.	2-23-19	rig	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,694	fishing
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Mid-California Oil Co., No. 1 Avenal, Kings Co.	11-23-16	....	grade
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,340	testing
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	reaming
Sheldon & Gholson, No. 1 Portersville, Tulare Co.	34-22-27	411	sd. sh. drilling
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	2,307	fishing D.P.
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,694	abandoned
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,030	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,760	sd. sh. drilling
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,594	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	3,045	suspended
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,130	suspended

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status—
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	3,174	sd. sh. drilling
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Barcus, W. I., No. 1 Watson, Los Angeles Co.	28- 4-13	rig	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	4,254	sd. sh. drilling
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,318	cemented
Pacific Western, No. 16 Inglewood, Los Angeles Co.	8- 2-14	2,103	sd. sh. drilling
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	36- 2- 9	2,860	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, A. W., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Wardell & Menichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	304	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,604	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	2,070	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Buena Park Oil Co., No. 1 Buena Park, Orange Co.	34- 3-11	mtl.	removed
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	3,458	hd. sd. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	670	sd. sh. drilling
Woods, D. W., No. 1 Salton Sea, Imperial Co.	7-11-16	764	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	29-16- 4	2,677	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 3	1,243	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-15- 3	446	suspended

the Union, Standard and Associated, have substantial acreage on this structure. Another important abandonment recorded during the week included the Barnsdall Oil Co.'s well No. 1 on Kern County Land Co. property in the Tejon-Wheeler Ridge area located in the extreme southern part of the San Joaquin Basin. This well, which is being abandoned as a duster at 7,126 feet, did not show anything resembling production from the grass roots down.

Dominguez

The Shell Oil Co. successfully completed a new well in the Dominguez Field of Los Angeles Basin when well No. 43 was brought in flowing 521 bbls. of clean 29.8 gravity oil per day from 5,300 feet. This hole was finished with a 6⅝-inch liner carrying 713 feet of perforated and 5,150 feet of 2½-inch tubing. The Shell does not contemplate the starting of any additional drilling in the Dominguez Field at the present time. This field will probably remain inactive for an extended period upon completion of the three wells which the Union Oil Co. is working at the present time. It is quite probable that the Republic Petroleum Co. will determine the status of its No. 1 Childs previous to conclusion of the Union's drilling program. In the Inglewood Field of Los Angeles Basin, the Baldwin Oil Co. is rotating ahead in No. 9 Brownmoor at 4,293 feet. The Pacific National has just completed preparations to conclude a production test on its well No. 5 at 4,318 feet. The Shell Oil Co. recently plugged back No. 9 Rindge from 2,848 feet to 2,760 feet in order to remove any doubt as to whether this well was producing from the first or second zones. This action was prompted by the spudding in a few weeks ago of No. 16 Rubel by the Pacific Western Oil Co. and since there does not appear any reason for deep drilling, it is quite likely that this project will be completed in the upper zone.

Huntington Beach

The Superior Oil Co. has recompleted its No. 1 Jones in the town lot area of the Huntington Beach Field flowing 510 bbls. of 22.5 gravity oil per day from 4,412 feet. This well, which has been off production for several months, was reconditioned and returned to production after being redrilled to 4,185 feet and cemented through perforations at 3,710 feet. The Texas Company is making preparations to recomplete well No. 1 on Plavan Lease No. 2 in this field after redrilling and deepening it from 4,002 feet to 4,360 feet. A 5¾-inch liner carrying 512 feet of perforated has just been landed in this project and the hole will be bailed for production immediately. The Wilshire Oil Co. is proceeding carefully in its development work in the Potrero Field of Los Angeles Basin, although the company was obliged to start two additional wells upon the completion of No. 1 Country Club. The Wilshire is running three strings of tools on the Country Club property at the present time, and, while grade has been made for a fourth project, this well will not be drilled unless developments warrant. The Potrero Field has proved a treacherous one due to the absence of a sufficient amount of oil sand to result in sustained production. Wells in this field come in with a fairly good kick but reach the pumping stage within a relatively short time. This has been especially true in the town lot area which adjoins the old section of the field on the north as very few wells in this area have shown a favorable aggregate production. If it were possible to produce the several thin oil zones simultaneously, operators might perhaps be able to at least recover drilling expenses but since this procedure has been impossible, practically every operator entering the field has ultimately wound up on the wrong side of the ledger.

Long Beach

There were no developments of special importance in the Long Beach Field during the past week, as the outer limits of production having been defined for several years and the lower zones having been fairly well depleted practically preclude anything of an unusual nature. The General Petroleum has recompleted its No. 3 Mission in this field pumping 50 bbls. per day from 3,753 feet, the hole having been plugged back from 7,486 feet. Dabney-Johnston Oil Corp.'s No. 77 Signal, another well given a test during the week, was somewhat of a disappointment as it was only good for 50 bbls. of fluid per day on the beam from 6,666 feet. Dabney-Johnston's No. 85 Signal, while it has failed to show any oil production, is yielding a fairly good return as it is producing approximately 800,000 feet of natural gas per day from 5,040 feet. There are a number of wells being plugged back in the Long Beach Field at the present time and the tendency toward this procedure appears to be increasing.

The Union Oil Co. is reducing its crude oil purchases in California approximately 8,000 bbls. per day in order to alleviate its overtaxed storage facilities. The oil which the Union has declined to purchase in the future is expected to be allocated by the general committee to the Shell, Texas, Richfield and possibly Associated. The Union has been absorbing more than its prorata share during the past several months but now finds it necessary to reduce its commitments as its own production has been severely reduced in conformity with the curtailment program. If the amount of production purchased had been reduced in the same ratio as the company's own production, there would not be any necessity for disturbing the picture as it has existed up to the present.

BUT ONE COMPLETION REPORTED IN MICHIGAN

By George A. Whitney

MOUNT PLEASANT, Mich., July 11. Only one completion was reported from the Central Michigan Field during the week, Pure Oil Co.'s No. 2-A well, 330 feet from the south and west lines of the J. W. Holmes farm, SW SW NW, Section 8, Greendale Township, Midland County, reported with an initial of 750 bbls. from the Dundee formation.

The test of R. D. Malcolm on the Vernon G. Hastings farm, NE NE NW, Section 13, Greendale Township, Midland County, which struck salt water at 50 feet in the Dundee formation and reported dry, was given a shot and now is reported a producer. This well is in the east extension of the East Pool and is an offset to the Stapleton well completed a couple of weeks ago and reported good for 1,000 bbls. initial.

In Greendale Township, Midland County, W. L. McClanahan, Inc. is around 2,600 feet in No. 1 in the southwest corner of the Schaffer farm, SW SW SW, Section 12. Gordon Oil Co.'s No. 1 well, 990 feet from the north line and 330 feet from the west line of the T. H. Taulker farm, NW NW SW, Section 7, Lee Township, same county, is below 2,000 feet, and nearing the top of the Dundee formation. Michigan Oil & Gas Co.'s No. 1 well, on the Bond farm, SW SW NE, Section 19, Lee Township, same county, is drilling around 2,600 feet. Pure Oil Co.'s No. 4 in the southwest corner of the Charles Mullett and others farm, SW SW NE, Section 15, Greendale Township, is drilling around 2,100 feet.

New Drilling Permits

A permit has been issued to George G. Hanners for a test in the northeast corner of the Keeler-Mitchell farm, NE NE NW, Section 9, Broomfield Township, Isabella County, in the gas field about 12 miles west of Mount Pleasant. A permit was also issued to the Old Dutch Refining Co. for a test in the southwest corner of the John Opperman and others farm, SW SW SE, Section 12, Greendale Township, Midland County to the Muskegon Oil Corp. for a test 990 feet from the south line and 330 feet from the west line of the P. Wiersma farm, NW SW NE, Section 14, Dalton Township, Muskegon County, and to the Pure Oil Co. for a test 2,310 feet from the south line and 330 feet from the east line of the James P. Moffett farm, NE NE SE, Section 14, Greendale Township, Midland County.

WHAT USERS SAY: No. 6

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Central Ohio District Is Busiest in Central West; Kentucky Has Fairly Good Producers

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 11.—In the Central Ohio Field there were five completions and many more wells under way than in any of the other fields in the Central West while Kentucky is doing its usual amount of work without rushing completions for fear prices might decline.

In the old Lima Field but one completion was reported, C. A. Peavey's No. 9 on the E. W. Prowant farm, Section 1, Bath Township, Allen County, with an initial of 5 bbls. In the same county, H. F. Kelly and others are drilling a second test on the Irville Hanes farm, Section 19, Perry Township, same county.

The Lima Pipe & Supply Co. abandoned No. 4 George R. Julian farm, Section 34, Moulton Township, Auglaize County, and No. 1 on the Milt and Emma R. Wolfe farm, same section.

In the Tiffin Field, Nick Mayskvick has a rig on the Harry Shumaker farm, Section 10, Hopewell Township, Seneca County. George W. Ackerman and others are drilling on the Mary McElhaney farm, Section 15, same township.

In Mercer County, Ben Post is drilling on his own farm, Section 21, Granville Township, and Masters Oil Development Co. is drilling on the Adam Hoening farm, Section 19, Gibson Township, same county.

In Wyandot County, the Erie Oil & Gas Co. is drilling a second test on the McLoyd Brown farm, Section 21, Tymochtee Township.

CENTRAL OHIO

Of the five completions reported from the Central Ohio Field, two were dry and three were gas wells, with a large number of drilling wells, new rigs and locations staked.

In Stark County the Ohio Fuel Gas Co. drilled in a gas well in No. 3-5,609 on the Henry W. Stockert farm, Section 15, Jackson Township. East Ohio Gas Co. is reported shut down at No. 4 on the Howard B. Fawcett farm, Section 17, same township, at around 300 feet. Kime and others are rigged up ready to start spudding at No. 2 Charles Oberlin farm, Section 6, same township. Wittmer Oil & Gas Co. is also spudding No. 1 Blanche Connell farm, Section 24, Lawrence Township, same county. East Ohio Gas Co. made a location for a second test on the H. S. Belden farm, Section 24, Jackson Township, same county.

In Belmont County the Ohio Fuel Gas Co.'s No. 1-5,619 D. M. Huntsman farm, Section 28, Somerset Township, is reported dry at 1,845 feet. Bradfield and others' No. 2 on the T. C. McCort and J. Patterson farm, Section 32, same township, is a gas well from 1,947-73 feet, while John Jefferies and others' test on the George Butler farm, same section, is a gas well at 1,755 feet.

Whitehill Oil Co.'s No. 6 James Boyer farm, Section 6, Hopewell Township, Muskingum County, is reported a dry hole at 3,216-20 feet, there being only a slight showing of oil.

McMillan and others made a location on the Sylvie Jackson farm, Section 15, Carlisle Township, Lorain County.

Star Mills Co. is drilling a second test on the Rena E. Karr farm, Section 11, Sutton Township, Meigs County. Thomas and others are drilling a second test on the Pearl D. Nysell farm, Section 27, Salisbury Township, same county.

INDIANA

Four completions were reported from the Indiana fields. In Gibson County the Big Four Oil & Gas Co. drilled in a test in the northwest corner of the Elmer Hunt farm, NW Section 19, Washington Township, where a fair gas showing was found at 1,259 feet. It was drilled to 1,286 feet and plugged back to save the gas, as no commercial oil was found. In the same county, E. C. Wharf drilled a test in the northwest corner of the F. P. Hope farm, SE Section 15, finding a dry hole at 1,294 feet. Big Four Oil & Gas Co. is drilling No. 3 on the Lottie Hope farm, SE Section 18, and starting a second test on the Robert E. Huey farm, SE Section 18, same township, the well being in the northwest corner of the lease.

In Pike County, Washington Township, H. H. Risher's test in the northeast corner of the James M. Thomas farm, SW Section 19, was dry at 1,143 feet. In Logan Township, Rendal & Stroble abandoned No. 2 Joe Carr farm, SE Section 22. United Oil Corp. and others abandoned No. 5 on the C. Hightower farm, in the SW of Section 22, also Nos. 1 and 6 on the E. Atkinson farm, NE Section 22, Logan Township.

In Sullivan County, Charles W. Scott's No. 7 in the southwest corner of the C. L. Davis No. 2 farm, SW Section 14, Turman Township, is a 1-bbl. well at 810 feet.

ILLINOIS

In the Illinois fields three new wells were reported, one drilled by the Cisil Heirs Oil Co., on the Cisil heirs, which is No. 6, in Wabash Township, Wabash County, and is a light gas producer. In Friendship Township, same county, the Keen Oil Co. abandoned Nos. 1 and 2 A. B. Keen farm, SW Section 19.

(Continued on Next Page)

Southwest Pennsylvania Gets Best Producer; Washington County Test to Go Deeper

By STAFF CORRESPONDENT

PITTSBURGH, Pa., July 11.—Southwest Pennsylvania was the scene of the best test brought in so far this year in the Eastern fields. In Amwell Township, Washington County, between Laboratory and Pancake, the Union Gasoline & Oil Corp., a subsidiary of the Columbia Gas & Electric Co., completed a test on the Mary B. Lindley farm. It was drilled to a depth of 2,851 feet, 5½ feet in the Fifth sand, and started flowing. It produced 240 bbls. the first 15 hours and continued flowing at the rate of about 15 bbls. an hour during the next day when it bridged over. The hole will be drilled deeper in the sand. The Mary B. Lindley farm is about 53 acres.

This test followed two in this vicinity drilled in a few months ago by Raymond Orrill & Co., one on the G. L. Walker farm, and the other on the Martha H. Hazlett farm, both fair producers but not so large as the Union's test. Two new locations have been made by Raymond Orill & Co., one on each of the two farms, and an additional location has been made on the Mary B. Lindley farm by the Union Gasoline & Oil Corp. There was some gas in all three tests but not in commercial quantities.

In all districts of the Eastern fields nine wells were completed, five of them producers with an initial production of 340 bbls., and four gas wells. In addition, there were reports of three dry holes. Most of them were tests. At present there is scant improvement in the amount of work going on in the eastern fields. Little is being done in settled territory.

VIRGINIA

Of interest to eastern operators are the tests drilling in Virginia, four in number, and one in lower West Virginia. As yet no gas or oil has been found, although one of the tests is now drilling at 4,250 feet. In Buchanan County, Virginia, Elkins and others have a test drilling at that depth on the Smith farm, and it is scheduled to go considerably deeper. It is at present drilling in a lime formation with no showing and was spudded in with 42½ feet of 13-inch, and following that there is 2,512 feet of 8¼-inch casing and 3,655 feet of 6⅝-inch casing.

On Holston River in Washington district, Washington County, Virginia, the test of Brehn and others has reached a depth of 2,115 feet on the J. M. Arnold farm. In Wise County, on Guest River, in Charleston district, Benedum and Trees have reached a depth of 750 feet on the J. Kaufman farm. Another new test of these operators has spudded in and started drilling on the Clinchfield Coal Co. tract in Russell County. It is 100 feet deep at present. In the lower part of West Virginia the test of these operators on the Pocohontas Coal Co. lease in Big Creek district, McDowell County, and on the waters of Long Branch, has reached a depth of 1,740 feet.

SOUTHEAST OHIO

Four producers, mostly shallow wells, were reported from Southeast Ohio. There were also two dry holes. The largest completion was No. 5 of Laura K. Lorenz and others on the Catherine Lorenz farm in Duck Creek Valley, Lot 104, Fearing Township, Washington County. It was drilled in the Mitchell sand at a depth of 170 feet and produced 30 bbls. a day natural and was not shot. The same operators completed No. 6 on the same farm and lot at a depth of 192 feet in this formation which produced 5 bbls. the first day after shot. In Palmer Township of this county, and on Lot 1,082, R. W. Turney and others drilled a test on the S. E. Rowland farm in the Cow Run sand to a depth of 553 feet. It proved to be a dry hole.

In Licking County, C. R. and G. W. Settles completed a test on the John A. Hughes farm, Lot 3, Mary Ann Township, in the Berea sand at a depth of 675 feet. It produced about 2 bbls. the first day after shot and is showing for about a barrel pumper. In Monroe County the Preston Oil Co. drilled a test on the James Mallett farm in Section 10, Franklin Township. It is a 3-bbl. producer after shot from the Injun sand at a depth of 1,326 feet, and showed about the same quantity before shooting.

Another dry hole was the test of Charles Palmer on the McAfee Brothers farm in Section 13, Runley Township, Harrison County. It was located between production at Scio and Runley and proved dry in the Berea sand at 1,280 feet.

Washington County

No developments occurred in this county in the deep sand being tested. Only one well is now drilling, the test of E. E. Grimm and Benedum and Trees on the E. E. Knowlton farm in the NE of Section 10, Independence Township. The hole has been reamed out to a depth of 3,200 feet within 350 feet of the original depth of the test. As soon as that depth has been reached drilling will start to the Niagara lime.

In the NE of Section 18, Newport Township, the Huntsman Gas Co. has reached a depth of 700 feet on the John Butler farm. This is to be an Injun sand well if completed.

WEST VIRGINIA

Two fair gas wells and one small one was the total of the week's completions in West Virginia. No new production was added.

On Triplett Run in Spencer district, Roane County, K. M. Hunt and others completed a test on the G. R. Riddle farm in the Salt sand at a depth of 1,497 feet. It started off with a volume of gas estimated at 1,000,000 feet a day. In the same district, O. E. Garrett and others completed a test on the Roy G. Hildreth farm on Little Creek, about 2,500 feet east of the test of the Hope Construction & Refining Co. on the W. R. Goff farm. It was drilled in the Injun sand and is showing for over 1,000,000 feet a day.

In Logan County, the West Virginia Gas Co. completed No. 36 on the Dingess Run Coal Co. tract in Logan district. It had a small showing of gas from the Berea at 2,897 feet and was plugged.

Drilling in West Virginia

In Cabell County, the Midway City Gas Co. is cleaning out its test on the O. C. Morrow farm in Guyandotte district after shooting at 3,060 feet. In this district, C. C. Wolfe is down for tubing in his test on the J. F. Weatherington farm at a depth of 2,956 feet. The Standard Ultramarine Co. has reached 1,700 feet on its own property in this district. C. C. Wolfe has his No. 4 on the Ben Lomond Land Co. lease down to 1,215 feet. In Barboursville district, the Merritts Creek Gas Co. is setting up a drilling machine for a second test on the Ohio River Land Co.'s tract, and also one on the Hans-Watts Realty Co. lease for No. 3. In Guayan-

dotte district, C. C. Wolfe is rigging up on the T. H. Freeman farm.

In Wayne County the Southern West Virginia Gas Co. is drilling on the A. W. Preston farm in Union district and is down 618 feet. In Lincoln and Stonewall districts, work has been suspended. In Gilmer County, James A. Tierney is down 1,778 feet in a second test on the F. G. Hardman farm in DeKalb district. In Monongalia County the Pennsylvania Counties Gas Co. is down 1,638 feet on the J. L. Jamison farm in Grant district.

In Ritchie County the King Knob Oil & Gas Co. is drilling on the Albert Carpenter farm in Murphy district and has reached 1,640 feet. In this district the Mary Osbourne Oil Co. is down 835 feet on the M. R. Osbourne farm. In Clay district the test of Ross Richards and others on the L. E. Robinson farm has reached 1,200 feet.

In Tyler County the Ohio Oil & Gas Co. has a deep test drilling on the A. D. Arnett farm in Meade district, which is now 3,050 feet deep. In Union district, Howard Hall and others are 600 feet deep in No. 3 on the Martha Johnson farm.

In Pleasants County, W. H. Hammett is drilling on the George and Mary Jarvis farm in Grant district and the hole is an even 1,000 feet deep. In Union district, Albert Neely and others are preparing a location for a second test on the R. E. Amos farm. In Wood County, Charles Smith has his No. 4 on the Elaine Casteel farm in Union district drilling at 600 feet.

In Wirt County the Rock Run Oil Co. is drilling on the J. H. Leep and others farm in Clay district and is down 500 feet. Another test started in Pleasants County is on the John Carter farm in Grant district where M. C. Martin, Jr., is drilling at 300 feet.

SOUTHWEST PENNSYLVANIA

In addition to the Union Gasoline & Oil Corp. test in Amwell Township, Washington County, there was one small gas well completed in Greene County, and one dry hole reported. In Springhill Township the Carnegie Natural Gas Co. completed a test on the J. E. Laugh farm in the Fourth sand and it is showing for a small gas well. In the same township the South Penn Oil Co. drilled its test on the W. T. White farm deeper from the Injun sand to a depth of 3,560 feet. It was dry in all sands under the Injun and may be plugged off at that formation for a small well.

In Hanover Township, Washington County, C. L. Ferguson is rigging up on the Pittsburgh Coal Co. tract. In this township, John Reed & Co. have their test on the Silas Patterson farm down past the 2,000-foot mark.

In Amwell Township the test of the Philadelphia Oil Co. on the John Kelsey farm is standing at 2,300 feet. In South Franklin Township the Carnegie Gas Co. is down 1,650 feet on the F. Dickinson farm.

Central West Fields

(Continued from Preceding Page)

In the Casey Field of Coles County the Homestead Oil & Gas Co. drilled a test on the 10 acres of the NW NW Section 21, Pleasant Grove Township, on the W. A. Smith farm, but it was dry at 1,003 feet.

In southwestern Illinois, in the Millstaat area of St. Clair County, Joseph May drilled a test on the Theodore Stutz farm, NE Section 13, and found stray gas at a depth of 150 feet, but drilled to a total depth of 1,491 feet, without finding commercial oil pay.

In Lawrence County, Dennison Township, John Phipps abandoned No. 7 on the Simon Seed farm, NE NW Section 19. In Lawrence Township, the Ohio and Silurian Oil companies abandoned No. 9 Mary E. Penner farm, SE Section 13, and the Ohio Oil Co. Nos. 2, 5 and 6 M. O'Donnell farm, SW Section 17. In Allison Township, the Ohio Oil Co. abandoned Nos. 1 and 3 Sophia Hebert farm, SE Section 15, and No. 1 James Emison farm, SW Section 15, same township.

In Madison County the Minther-Goethe and others' test on the Fred Stuz farm, Section 34, Fosterburg Township, is reported a dry hole.

KENTUCKY

Western Kentucky had a fairly good week with some nice shallow sand producers and indications are for a more active development. In Ohio County the Ivyton Oil & Gas Co.'s No. 11 well, 200 feet from the south line and 900 feet from the west line of the R. A. Miller 175 acres, an offset to J. W. Christian's No. 1, produced an initial of 85 bbls. Cumberland Petroleum Co.'s No. 8, in the southeast corner of the David Brooks 120 acres, in the Haynesville Pool, is reported good for 15 bbls., and Bolling & Hume's No. 3 well, 800 feet from the north line and 150 feet from the west line of the J. W. Christian farm, an offset to No. 8 on the Brooks farm, is also a 15-bbl. initial producer. No. 4, same farm, is standing. Ivyton Oil & Gas Co. is starting No. 12 on the R. A. Miller farm, and the Cumberland Petroleum Co. is starting No. 9 on the David Brooks farm.

Half a dozen completions were reported in the Daviess County area, known as the Owensboro Field, the best being Ellis and Ashby's No. 6 on the Myrtle Howard farm, in the northeast corner of the lease, which showed 50 bbls. initially, while No. 5 is credited with an initial of 100 bbls. No. 6 found its pay at 648 feet. No. 7, same farm, is drilling in the Jones Pool. Miller and others' second test in the northwest corner of the J. C. Alsip farm, showed 5 bbls. at a total depth of 716 feet. Mida McMahan drilled in a 70-bbl. initial producer 150 feet from the north line and 450 feet from the east line of the Robert Jones farm, in the Jones Pool, at 632 feet. Ellis and Ashby's No. 6 well, 150 feet from the south line and 1,050 from the west line of the Dora Cooper farm, in the same pool, produced 95 bbls. initially at 634 feet. Frank Cox and others' No. 5 Charles Bell farm, same pool, produced 50 bbls. at 643 feet.

Trout, Cameron and others' second test, 725 feet from the south line and 225 feet from the east line of the R. A. Baughn 62 acres, 2 miles north of Calhoun, in McLean County, produced 30 bbls. in 24 hours from 1,203-30 feet. Miller & Shrarella are drilling on the Smith farm, same county, and Vickers and others are drilling No. 2 King farm, same field.

In Henderson County, in the Niagara Field, the Imperial Oil & Gas Products Co.'s No. 1 on the Freeman-Nurse farm, reported with an initial of 40 bbls. and is drilling No. 1 on the S. A. Freeman farm. On another S. A. Freeman farm the same company is drilling No. 3. Turner & Tichnor are drilling on the Chester Duncan farm. Young, Knapp and others' test on the Walter Lucas farm, was a dry hole in the Jett sand.

In Hart County, M. F. Snyder and others' No. 9 M. Richardson farm is said to have produced 60 bbls. initially. Norris & Davis' No. 7 Ross farm, in the LeGrande Pool, is also estimated at 60 bbls. Lafferty and others' No. 5 Brooks farm is estimated at 70 bbls. Wright and Wilson's No. 7 Edward farm, had an initial of 50 bbls.; Clark & Wilson's No. 4 John Gillock farm, also in the LeGrande Pool, produced an initial of 40 bbls., and H. Z. Clark and others' No. 3 Dilly farm, same pool, 35 bbls.

Large Producer Completed in Turner Valley, Best Well Reported in Several Months

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 9.—In the South Turner Valley, Hylo Syndicate's No. 1, LSD 12, Section 4-19-2w5, which recently got the crude naphtha horizon 169 feet in the Madison lime at 5,670 feet, has developed into a large producer. The wet gas flow is estimated 11,500,000 feet a day, and crude naphtha recovery is reported to run between 250 and 300 bbls. The operators claim the production is a high grade crude rather than naphtha, testing 64 to 67 degrees, but it is an amber colored product, showing little similarity to the light green crude from Miracle Oils' No. 3 deep test in LSD 11, same section. Officials of the Turner Valley Gas Conservation Board are rating the production as naphtha, and state that the dark color is characteristic of first production in this area.

The well has been partially shut in, and tests under various pressures show little difference in production. It is the first large producer completed in the Turner Valley Field in some months, and offsets Mercury Oils' No. 1 big producer. The area was favorably reported on as long ago as 1914 by Philip Minor, an American geologist, and leases secured by O. B. Stockford on the strength of this report were ultimately subleased by Hylo Oils, Ltd., for the present test. The Hylo company got to about 2,000 feet. Later, after Mercury Oils' No. 1 came into big production, the Hylo Syndicate, formed by S. G. Carscallen, W. Fay Becker and Clarence and George Snyder, took over the test.

The bringing in of Hylo's No. 1 as a large producer threatened for a time to affect seriously the Turner Valley Gas Conservation Board's program. Conservation board rules require wells to be closed in while field pressures are being taken, and it was claimed that shutting in would damage the well.

Conservation Is Enforced

The board's conservation order went into effect in Turner Valley on July 1, after some delays due to the necessity of determining the condition of certain wells and the probable effect upon them of shutting in the gas. Operators generally are reported to have complied with the board's order to shut in their wells for testing purposes, to determine the flow and pressure of each well. While a tentative prorating order has been issued, this will probably be adjusted in the light of results secured from the tests. The board's tentative order calls for reduction of the aggregate gas flow to slightly less than 200,000,000 feet a day, which will involve a decrease in crude naphtha recovery.

The board was able to go ahead with its conservation program following the dismissal by Justice Ewing of the action of Spooner Oils, Ltd., which sought an injunction restraining the board from cutting down the flow of gas, and a declaration that the legislation authorizing this was ultra vires. Spooner Oils, Ltd., through its counsel, H. S. Patterson, K.C., has filed notice of appeal to the appellate division of the Supreme Court of Alberta. The appeal will not be dealt with until next fall. Application was also made to Justice McGillivray of the appellate division for a stay of execution which would restrain the board from interfering with the Spooner production but would not affect the general enforcement of conservation.

F. P. Fisher Retires

Frank P. Fisher of Mount Vernon, Ohio, technical adviser of the Turner Valley Gas Conservation Board, has retired from that position, according to an announcement made recently by Judge A. A. Carpenter, chairman of the board. Mr. Fisher came to Alberta over a year ago as technical adviser to the Alberta government in its prolonged study of the Turner Valley gas problem, and acted in a consultative capacity in connection with the various projects for unit operation of the field which were brought up from time to time, and at the various public hearings and conferences which preceded the adoption of the present conservation measures. When the Turner Valley Gas Conservation Board was constituted this spring, Mr. Fisher agreed to continue for a month to help get the work started, and as a result of the various delays due to litigation or other causes, this period was ultimately extended till the first week in July. In spite of the reluctance of a large number of the operators to accept conservation, Mr. Fisher carried out his difficult duties in such a manner as to retain the good will of a large majority of the operators.

Imperial Makes Statement

On the occasion of his recent visit to the Canadian West, C. O. Stillman, president of Imperial Oil, Ltd., issued the following statement relative to Turner Valley Conservation:

"We have already indicated our readiness to do our share in carrying out a conservation program in the Turner Valley. We have by far the biggest individual investment in the field and we realize that the immediate gain that could be obtained by unrestricted operation is tempting, but all who are interesting in the valley should not overlook the general benefits that will result under the most economic operation. If so operated, the field will yield, over a period of years, a great deal more wealth than under a plan whereby there is no cooperation among all the interests concerned."

South Turner Valley

In the far south end of the Turner Valley Field, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, is drilling below 4,133 feet. Canadian Royalties' No. 1, LSD 9, Section 5-19-2w5, formerly Spray Oils' No. 1, which recently resumed at 2,310 feet, is making new hole below 2,505 feet.

Central Turner Valley

In the Central Turner Valley area, McLeod Oil Co.'s No. 4 deep test, LSD 16, Section 1-20-3w5, is reported making hole below 6,418 feet, and some 2,688 feet below the top of the Madison. The test got a little oil in the top of the Banff shales at 5,560 feet, and the drill appears to be in another limestone formation. New McDougall-Segur Oil Co.'s No. 5, LSD 14, Section 12-20-3w5, is reported working on derrick, for a shallow test of the McDougall-Segur crude oil sand.

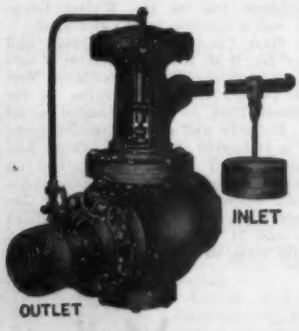
North Turner Valley

In North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, has recovered lost tools, and is making hole below 3,850 feet.

Fisher Creek Test

On the Fisher Creek structure west of Calgary, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, is deepening from 2,900 feet after pulling casing, cleaning out and making new water shutoff. Faulting was suspected a little earlier,

. . for high pressure gas transmission



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but it is now believed this condition is not serious, and the test will get the producing horizon at almost normal depth.

On the Moose Mountain structure, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is shut down at 3,342 feet; and Graystone Consolidated's No. 2 Signal Hill, LSD 9, Section 34-23-5w5, is standing at 4,224 feet.

Red Coulee Field

In the Montana end of the international Red Coulee Field, Askalta Oils' No. 5, SE NE Section 2-37-4w, is reported finished at 2,516 feet with about 30 bbls. settled production and a gas flow estimated 2,000,000 feet a day. Askalta's No. 6, same section, is reported drilling below 390 feet. There is no drilling at present on the Alberta end of the structure.

Test at Steveville

In the Steveville district, Steveville Oil Co.'s No. 1 is reported building derrick. Location is close to the town, and Union Drilling Co. of Calgary has the contract. Numerous small leaseholders have pooled their acreage to facilitate the test. The area to be tested is on the Red Deer River almost due east of Calgary and about midway between that city and the Saskatchewan boundary. While reports have been made on the territory by geologists and extensive leasing has been done, this is the first definite commercial test to be undertaken in the actual vicinity of Steveville. Drilling is expected to start this month.

Montana Border Tests

A Minnesota syndicate headed by John Dohm has started a test on the Montana end of the international Flat Coulee structure. The Flat Coulee is one of the structures in the Sweetgrass Hills area which extends north across the boundary. Dohm's No. 1 is an offset to the Sunburst test which recently got a flush production reported between 50 and 125 bbls. The Sunburst well is about 2 miles south of the boundary and about 4 miles from Mayland Southern's No. 1 in LSD 13, Section 4-1-9w4, on the Alberta side, which got gas in the same horizon.

Twin River Test

On the Twin River structure southeast of Lethbridge, Parco Oil Co.'s No. 1, LSD 16, Section 34-1-20w4, is apparently not a commercial well, though early tests indicated a flow of 15 bbls. a day from the top of the Madison lime at 3,890 feet. The test was drilled on acreage of Nordon Corp. under a joint arrangement, work starting in May, 1931. No important showings were secured in the upper horizons, nor were any serious difficulties encountered. The test got the top of the Madison last fall at 3,870 feet, and around 3,890 feet struck oil and gas showings reported to indicate a flush production of 100 bbls. a day. Drilling was continued, getting water at 3,905 feet and a heavy water flow at 3,938 feet. The hole was carried to about 4,072 feet without encountering any additional production in the Madison; it was then plugged back to 3,890 feet for a test of the oil sand. Shut in for testing, the well built up a pressure of 800 pounds and flowed 15 bbls. a day. A small shot failed to increase this and a second and larger shot was tried. In later tests the well made about 5 bbls. a day, and cleaning out and reconditioning apparently failed to increase this production.

The test was the southernmost of three on a northwest-southeast line to get crude oil showings almost simultaneously in the top of the Madison. Parco's No. 1 got its show at 3,890 feet; Texas-Imperial's No. 1, LSD 14, Section 22-8-22w4, a short distance west of Lethbridge, encountered a small show of crude at about 4,551 feet, and Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, encountered a very promising shot at 4,920 feet. The tests were regarded by some operators as indicating a continuous structure over a distance of more than 50 miles with a northwest-southeast trend, and dipping toward the north. Texas-Imperial's No. 1 has been definitely abandoned, deeper drilling encountering a heavy water flow and the oil sand failing to develop anything approaching commercial production. Hudson's Bay Oil & Gas Co.'s No. 1 Keho is standing cemented, and will have to redrill from 4,800 feet and sidetrack lost tools before making a definite test of the oil horizon. It apparently had the best showing of the three.

The Twin River well, while not commercial, is regarded as an indication of commercial possibilities in the Montana area north and west of the Cut Bank Field and on the Alberta side southeast of Lethbridge. It is reported that Parco's No. 2 will be started this season on a location higher on structure.

Manitoba Gas Test

In the Manitou district, southwestern Manitoba, Commonwealth Petroleums, Ltd., is moving in casing for its No. 2 well in LSD 2, Section 26-2-9wPM. Casing will be run to 1,917 feet and drilling resumed some time this month.

British Columbia Test

In the Sage Creek district, southeastern British Columbia, Crow's Nest-Glacier Oil Co.'s No. 1 diamond drill outfit is working below 3,052 feet. Recent cores from this depth show fractures, indicating the drill is working in the area shattered by the shot in the old hole; and the fractures show considerable oil. Core samples show the limestone flecked with paraffin.

In the Cariboo district, Patrick Syndicate's No. 1 on the Australian ranch near Quesnel, is reported to have resumed drilling from about 1,400 feet.

Fabyan District

The Fabyan district in the western end of the Wainwright Field has not been so extensively drilled as the main Wainwright area. In addition to Maple Leaf Oil & Gas Co.'s two gas producers, which supply the town of Wainwright, some five tests have been drilled at various times. The two earliest tests were by the Grattan Syndicate of Edmonton, No. 1 in SE Section 4-45-8w4, drilled in 1915, being abandoned at 1,620 feet after encountering small oil and gas shows at various horizons; while No. 2, LSD 1, same section, in 1917 was carried to 1,890 feet and finished with a commercial gas production, which was capped. Neither of these tests appears to have reached the main Wainwright oil horizon.

Later, Imperial Oil, Ltd., drilled two tests on acreage of the Grattan Syndicate. Imperial's No. 1 Grattan was the famous "Fabyan mystery well," which local people generally believed to be a commercial producer. It was carried to a depth below 2,665 feet, getting the lower Cretaceous around 1,870 feet and the top of the Paleozoic lime at 2,120 feet. It encountered water in three horizons between 1,871 and 2,665 feet; gas in four horizons between 710 and 1,870 feet; and oil shows in eight horizons between 710 and 2,225 feet, two of them apparently in the Devonian lime. When opened up at intervals, the accumulated gas pressure blew an emulsion of oil and water over the derrick, which gave rise to the report that it was a producer; but Imperial Oil officials consistently stated that it was noncommercial. Location was in LSD 16, Section 18-45-7w4, toward the east of the Fabyan area. Imperial's No. 2 Grattan, farther west, in LSD 2, Section 14-45-8w4, was abandoned at 2,105 feet after encountering four water horizons, two gas shows but no oil. The leases were ultimately surrendered by Imperial Oil, Ltd., and the mystery well was taken over by Fabyan Petroleums, Ltd., which holds extensive acreage in this area. The latter company's No. 1 test in LSD 8, Section 24-45-8w4, drilled in 1930, got numerous small oil and gas shows, but was abandoned at 2,022 feet.

Drilling in Ontario

In the Dawn Field, Lambton County, Ontario, Union Gas Co.'s No. 62, northeast of No. 59 gasser, is spudding in. In the Oil Springs Field, Fairbanks Oil & Gas Lease's No. 3, close to Oil Springs village, is reported drilling around 2,250 feet. In Kent County, Union Gas Co.'s No. 21 D'Clute, Lot 22, Concession 10,

Raleigh Township, is reported drilling below 850 feet. In Norfolk County, Acme Gas & Oil Co.'s No. 9, Ronson farm, near Mabee's Corners, is reported drilling around 900 feet.

Athadome Test

In the Athabaska district, northern Alberta, Athadome Oils' No. 1, N half, Section 20-72-24w4, is reported down 1,552 feet, with considerable water in the hole. Arrangements have been made to continue 300 feet. It is unofficially reported that a second small flow of gas, with traces of oil, was encountered around 1,200 feet. The well is stated to be logging higher than anticipated, and a potential oil horizon is now looked for around 1.700 feet.

Kansas Fields

(Continued from Page 52)

June 1. This is due to the completion of new wells in the area. The potential production on July 1 was 45,688 bbls. a day from 38 wells. The majority of these areas are still shut in awaiting a pipe line outlet.

The umpire also advises that the potential production of the Ritz-Canton Pool, in McPherson County, on July 1, was 125,541 bbls. a day from 147 wells. Fifty-nine chat producing wells are credited with a potential of 25,717 bbls., and 88 Viola lime wells, with a potential of 99,824 bbls.

Barton County

Smith & Ash and others' No. 1 Wilson, C NW SW Section 13-18-14w, is a rig.

Butler County

Harry Garden's No. 1 Brenner, NW cor. SW SE Section 36-26-5, was drilling at 700 feet. Flint Hills Gas Co.'s No. 4 Martin, SW cor. NE SW Section 27-28-4, was completed for 250,000 feet of gas a day after a 25-quart shot at 1,493-1,518 feet.

Cowley County

McNabb and others' No. 1 S. W. College, NE cor. Section 11-32-4, is a rig. Trees and Brewer's No. 1 Armstrong, C SE SW Section 1-32-6, made 300,000 feet of gas a day from 2,473-2,517 feet. Roth & Farout's No. 3 Riedy, SE cor. NE SE Section 31-31-8, made 15 bbls. from sand at 1,930-75 feet.

Ellsworth County

Aylward and others' No. 5 Stratman, SW cor. SE SE Section 1-17-10w, made 2,198 bbls. of oil from 3,238-49 feet. Gypsy Oil Co.'s No. 1 Kozisek, SE cor. Section 16-16-10w, made 650 bbls. of oil from 3,354-85 feet.

Greenwood County

Troxell and others' No. 1 Smith (twin), SW cor. Section 5-24-12, is a machine. Simmons and Amerada Petroleum Corp.'s No. 10 Ellis, SE cor. SW SW Section 26-23-11, is a machine. Bisango and others' No. 1 Gilroy, SE cor. SW Section 17-25-13, was drilling at 600 feet. Harwood Oil Co. and others' No. 5 Carson, CSL NE NW Section 33-23-11, was spudding. Mathew and Rex's No. 2 Lewswanger, CWL SE NW Section S-24-12, made 185 bbls. of oil from 1,710-37 feet. Theta Oil Co.'s No. 25 Schneider, SE cor. SW NW Section 10-23-13, made 40 bbls. from 1,600-35 feet.

Harvey County

McBride, Inc.'s No. 1 Friesen, NW cor. SW Section 20-22-3w, is estimated at 3,000 bbls. from 3,505-13 feet. Stanolind Oil & Gas Co.'s No. 1 Froese, C SW NW Section 20-22-3w, was completed for 1,656 bbls. from 3,481-92 feet.

Haskell County

Victor Martin and others' No. 1 Martin, C NW Section 8-28-31w, is a rig.

Reno County

Olson Drilling Co. and Shell Petroleum Corp.'s No. 2 Sabin, C SE SW Section 13-23-4w, is a location.

McPherson County

Mylins and others' No. 1 Riger, SE cor. SW Section 16-21-3w, is a rig. Shell Petroleum Corp.'s No. 3 Johnson, NE cor. SW Section 35-19-3w, is a location. Rose Spring Drilling Co.'s No. 2 Dielman, NW cor. SW Section 35-19-2w, is a rig. Darby Petroleum Corp.'s No. 3 Coon, SE cor. SW Section 20-19-1w, is a location. Phillips Petroleum Co.'s No. 2 Hindmarsh, SE cor. SW SW Section 20-19-1w, is a rig. Shawver and Shell Petroleum Corp.'s No. 3 Lively, SE cor. NW NW Section 21-19-1w, is a rig. Mid-Kansas Oil & Gas Co.'s No. 1 Sperling, NW cor. NE Section 28-21-3w, pumped 355 bbls. of oil and 35 bbls. of water from 3,141-53 feet. Shell Petroleum Corp.'s No. 2 Johnson, SE cor. SW NW Section 2-20-3w, made 907 bbls. from 2,978-3,036 feet. The Texas Company's No. 1 Tipton, NW cor. NE Section 2-20-3w, made 982 bbls. of oil 2,988-3,040 feet. General Petroleum Co.'s No. 1 Middlesweet, NE cor. Section 9-19-2w, is a rig abandoned. Barnsdall Oil Co.'s No. 1 Ailmore, C NE NE Section 22-19-2w, an old well drilled deeper, Siliceous lime 3,512-16 feet, where it was dry and abanboned. Wolfe Creek Oil Co. and others' No. 2 Krehbiel, SW cor. NE NW Section 25-19-1w, made 150 bbls. from 2,917-3,000 feet. Carter Oil Co.'s No. 1 Lagree, SE cor. Section 17-19-1w, made 1,052 bbls. from 3,377-85 feet. Adams and others' No. 1 Aultman, NE cor. Section 21-19-1w, is a rig abandoned. Blankenship Petroleum Co.'s No. 1 Minear, NE cor. NW NE Section 21-19-1w, is a rig abandoned. Keyes Brothers' No. 1 Webster, SW cor. SE NW NE Section 21-19-1w, is a rig abandoned. Shawver and others' No. 2 Lively, SW cor. NW NW Section 21-19-1w, made 115 bbls. of oil from 3,367-79 feet, and was plugged back to 2,900-3,000 feet, where it made 11,000,000 feet of gas.

Rice County

Empire Oil & Refining Co.'s No. 1 Heckel, NW cor. SW Section 18-20-9w, pumped 816 bbls. of oil from 3,332-38 feet. Shell Petroleum Corp.'s No. 1 Murphy, C NW NE Section 4-19-9w, is a rig. Hipple & Liggett's No. 1 Rainet, NW cor. NE SE Section 3-21-6w, is a rig.

Rawlins County

J. G. Durham and others' No. 1 Weaver, SW cor. Section 3-2-35w, was abandoned at 3,939 feet.

Sedgwick County

Rosenthal and others' No. 1 Green, C S half N half SW SW Section 15-25-1, was drilling at 1,300 feet.

Woodson County

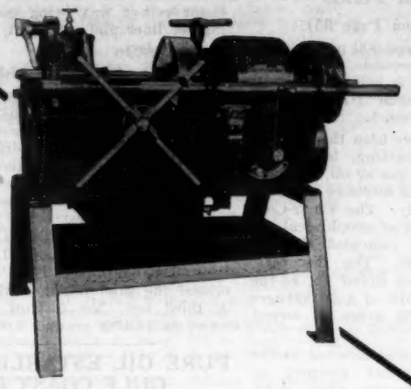
Theta Oil Co.'s No. 1 A. Shaffer, SW cor. SE Section 31-23-14, was drilling at 1,000 feet. Nye & Kilby's No. 1 Shaffer, SE cor. SW Section 31-23-14, made 250 bbls. of oil in 12 hours from 1,561-78 feet. Ward McGinnis' No. 1 Snyder, SE cor. NE SW Section 31-23-14, made 30 bbls. from 1,561-84 feet.

GEOPHYSICAL PROSPECTING

The American Institute of Mining and Metallurgical Engineers, 29 West Thirty-ninth Street, New York City, has issued the 1932 edition of "Geophysical Prospecting." This volume contains such papers as have been accumulated on this subject since the publication of the first geophysical volume of the transactions in 1929. There are seven papers on resistivity methods, two on electro-magnetic methods, three on magnetic methods, three on seismic methods, two on gravitational methods, and five on theoretical studies. In addition there are two general papers, one "Choice of Geophysical Methods in Prospecting for Oil Deposits," by E. DeGolyer, and the other, "Summaries of Results From Geophysical Surveys at Various Properties."

DEATH OF O. V. GOLDRICK

O. V. Goldrick, president of the Pennant Oil & Gas Co. died in Tulsa on July 6. Mr. Goldrick was a native of Pennsylvania. He graduated from the Indianapolis, Ind., high school and then entered the oil business. He joined the land department of the Roxana Petroleum Corp. in 1912. In 1917, with W. C. Baker, he formed the Pennant Oil & Gas Co. Mrs. Goldrick and six children survive.



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Gulf Coast Fields

(Continued from Page 55)

the deepest sand showed 600 pounds pressure, dry gas, in 40 seconds. As a result of the test a setting is being made with a full string of 7-inch (O.D.) casing and one joint of screen.

Colorado County has been the scene of much scattered wildcatting, but so far no production, either gas or oil, has been developed although the territory has been looked upon favorably. The Coyle-Concord test is the result of geophysical exploration which has indicated a large "high" or salt dome. The discovery, however, is pretty well sewed up, as the location is in the middle of a 20,000-acre block, of which 6,000 acres is owned in fee.

Some interest also was directed at the Sandy Point geophysical prospect in western Brazoria County when John Deering and associates' No. 1 Chapman, Strip 2, Andrew Robinson Survey, cored a sand showing oil at 3,273-85 feet. A later drill stem test showed dry and the hole is being deepened.

Brazoria County

Following a suspension of operations since September, 1930, Shell Petroleum Corp. is resuming development of its Danbury salt dome in central Brazoria County, where a derrick is up for No. 5 Blakely-Winston, H.T.&B. Survey No. 14. This will be the sixth test to be drilled on the dome, on which so far no commercial production has been found although a number of sands showing oil have been encountered and one well, the first drilled, swabbed a little oil estimated around 50 bbls. daily for a short time. This was from a shallow sand at 1,572-78 feet. This well also tested several lower sands found as deep as 4,820 feet but never was able to make a successful well and then was deepened to a total depth of 5,225 feet, where it was in salt topped at 5,225 feet, thus proving the dome. The other four tests were shallow, the deepest being 2,381 feet. Each encountered the shallow sands but efforts to complete them as producers were unsuccessful.

Sorrento Dome

Union Sulphur Co. has subleased the Sorrento Dome, Ascension Parish, from the Gulf Refining Co. and has made location and is building derrick for its first test, No. 21 United Land Co., which is following in order the numbering of wells drilled by the Gulf, all of which have been on land of the United Land Co. The new location is in the cap rock area, where the cap is topped around 1,650 feet. Five wells have been completed on this dome, four in the cap and one in a sand on the north flank. Of the cap rock wells, only one, the discovery well, completed in February, 1928, as a 4,000-bbl. producer, has proved of particular importance. This is the second dome in Ascension Parish, which Gulf Refining Co. has "farmed" out within the past few weeks, the other being Darrow, which Rio Bravo Oil Co. has taken over on a half interest to develop.

Rabbs Ridge

A possible 1,800-foot northward extension to the Rabbs Ridge Field, Fort Bend County, was indicated late in the week when The Texas Company's No. 1 Wolters, Samuel Kennedy Survey, cored a sand showing oil at 5,201-08 feet. The field, in which so far Humble Oil & Refining Co. and Gulf Production Co. jointly control all the production, already has been proved as one of the largest in area in the coastal salt dome district, being approximately 2 miles from the southernmost to the northernmost wells. All this area has been definitely proved productive with substantial extensions eastward and westward. Limits of the field have not been outlined except on the extreme south where one well was completed making considerable water. Gulf and Humble's No. 2-A Booth, on the northernmost end of present production, blew out late in the week while drilling at 4,588 feet. The well was killed and is being deepened to the 5,200-foot horizon being developed in the field. Humble and Gulf's No. 5-A Lockwood & Sharp at latest report was being completed, having set liner and screen at a total depth of 5,334 feet.

Cameron Parish

Union Sulphur Co.'s No. 1 Gulf land-Pure lease, northwest flank of Hackberry, Cameron Parish, Louisiana, twisted off 61 fourbles of 4-inch drill stem while reaming preparatory to running casing to test a deep sand showing oil at 8,316-24 feet. This is the second test drilled on that flank, the first being the same operator's No. 1 Gulf land-Humble lease, which was completed as a 1,500-bbl. well in sand at 6,001 feet. The Pure lease test missed the sand found in the first well. A third test, No. 2 Gulf land-Humble lease, is drilling around 5,900 feet.

PURE OIL ESTABLISHES GULF COAST DIVISION

HOUSTON, Tex., July 11.—Effective July 1, the Pure Oil Co. established the Gulf Coast as a separate division with Houston as the divisional headquarters. In the past, the Gulf Coast has been rated by the Pure Oil Co. only as a district, working under the Fort Worth divisional office. From now on the Houston office will report direct to the Chicago headquarters of the company instead of to Fort Worth.

This move will not result in any change in the executive personnel of the Houston and other Gulf Coast offices, although later larger accounting and operating departments may have to be built up. Chase E. Sutton, who has been district manager, will continue as division manager. Other heads of departments include Fred Dallas, now division superintendent; G. W. Arnold, chief of the land department; D. M. Davis, chief geologist; George E. Robinson, chief scout; Paul Williams, chief engineer, and W. B. Carlon, office manager.

INCREASE DUTIES ON WHITE MINERAL OILS

NEW YORK, July 11.—Importers of white mineral oil, who recently unsuccessfully fought a ruling by the Bureau of Customs imposing an import duty of 25 per cent ad valorem as a medicinal product, under paragraph 5 of the tariff act of 1930, have received another jolt in a ruling by the Bureau of Customs that white mineral oil will be dutiable at one-half cent per gallon when imported, under the petroleum section of the revenue act.

In addition, the bureau is canvassing refiners and the trade in an effort to determine the principal use of white mineral oil. If it is determined that the oil is used principally for lubricating purposes, as contended by some importers when it was recently classified as a medicinal product, it is expected that the sales tax of 4 cents per gallon will also be imposed on the product.

RUMANIA CURTAILS CRUDE PRODUCTION

NEW YORK, July 11.—Curtailment in Rumanian producing operations is indicated by preliminary reports covering May production, indicating a yield of approximately 530,000 tons. While the month's total was 10,000 tons ahead of the output for the previous month, it recorded a drop of 60,000 tons (some 400,000 bbls.) from production in May, 1931.

Astra Romana was the leading producer in May with 115,792 tons, Steaua Romana ranking second with 89,363 tons, Concordia third with 72,650 tons, Phoenix Oil fourth with 63,380 tons, and Creditul Minier fifth with 32,424 tons. Romano-Americana, subsidiary of Standard Oil Co. (New Jersey), was the sixth leading producer with 28,207 tons for the month.

DEATH OF A. D. McVEY

A. D. McVey, a well known pioneer pipe liner of the eastern fields, died at his home in Parkersburg, W. Va., July 2 after an illness of several weeks. Born in Washington County, Ohio, 1857, Mr. McVey entered the employ of the Tidewater Pipe Line Co. at Wexford in 1879. From that date his service was continuous in pipe line work, being transferred at various times to the South West Pennsylvania Pipe Lines and the Buckeye Pipe Line Co.

In June, 1895, Mr. McVey was transferred to the Eureka Pipe Line Co. with headquarters in Parkersburg, W. Va., and was in service with that company until his retirement in August, 1921. From the beginning in the field, Mr. McVey rose steadily and in 1912 became a director of the Eureka Pipe Line Co. and in 1918 was elected one of the vice presidents, which position he held until his retirement. A host of oil men, gathered at his home, paid tribute to the esteem in which he was held.

Wildcat Operations in Southwest Texas

(Continued from Page 56)

C. J. Webster Oil & Gas Co.'s No. 1 San Antonio Suburban Irrigated Farms, 200 ft. from S and W lines of Farm Lot 2, Blk. 49, in SW Bexar County ..... T.D. 200 ft.; set 10-in.

BROOKS COUNTY

Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2.168-ac. tract in SW part of county ..... T.D. 1,280 ft.; drlg.
M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur. ..... T.D. 1,086 ft.; drlg.

CALDWELL COUNTY

George Sullivan and Shell Petroleum Corp.'s No. 1 Plinsoll, 2,800 ft. to SW line, 300 ft. to NW line of tract and survey in M. Dennis Sur. ..... T.D. 4,092 ft.; abnd.
Kistler, Stivers & Hendrick's No. 1 D. Carter, 400 ft. from NW line of Sur., 300 ft. NE of Creek in L Allen Sur. ..... T.D. 1,485 ft.; standing in chalk.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Stewart Nelson in L&G.N. Sur. No. 43 ..... T.D. 4,021-25 ft.; waiting for csg.
V. F. Neuhaus et al's No. 1 Mattyles C. Barnett, 230 ft. from W line, 330 ft. from S line of Subd. 24 of Obid K. Winn Sur. ..... T.D. 2,066 ft.; S.D. for water.

DE WITT COUNTY

J. F. Richardson's No. 1 Virginia Taylor, 330 ft. from SE line of tract, 330 ft. NE of Minnehuilla Creek ... T.D. 2,200 ft.; drlg.
The Texas Co.'s No. 1 John McCrabb, 4,000 ft from SW line, 1,435 ft. from SE line of 794-ac. lease in James Quinn Sur. ..... T.D. 4,977 ft.; drlg.

DUVAL COUNTY

Astec Oil & Royalty Co.'s No. 1 Peters, 750 ft. from E line, 300 ft. from N line of S 160 ac. of Sur. 322 ..... T.D. 2,500 ft.; abnd.
R. F. Duggan & J. D. Clair's Smith No. 1 Sutherland, 150 ft. from S and E lines of NE NE of Sur. 188..... T.D. 800 ft.; drlg.
Frank Gravis' No. 3 Schallert in Sur. 255 (Palangano salt dome) ..... T.D. 253 ft.; drlg.
Clark & Cowden's No. 1 Sutherland, 450 ft. from W line, 150 ft. from S line of Sur. No. 3 ..... Spudded in.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 ..... T.D. 2,725 ft.; standing.
Plymouth Oil Co.'s No. 1 Parr, 6,250 ft. from W line, 1,925 ft. from S line of San Andres, Garcia grant ... T.D. 2,780 ft.; drlg.
The Texas Co.'s No. 1 Peters, 2,330 ft. from N and W lines of Sur. 162 ..... T.D. 2,751 ft.; abnd.
E. R. Thomas' No. 1 Wood-Welder, 1,000 ft. from S and 1,320 ft. from E lines of Sur. 283 ..... T.D. 2,503 ft.; abnd.

GUADALUPE COUNTY

John F. Camp's No. 1 Delaney, 2,572 ft. from S line, 1,515 ft. from W line of Delaney 400-acre tract in Jesus Cantu Sur. ..... Location.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.
Humble Oil & Ref. Co.'s No. 1 Fromme, 450 ft. from S line, 150 ft. from W line of lease on Geo. Kersey Sur.. T.D. 4,785 ft.; drlg.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... TD. 5,137 ft.; setting csg.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. ..... T.D. 5,070 ft.; contract depth.

GONZALES COUNTY

Crowder Oil Co.'s No. 1 Preston, 1,000 ft. from W line, 2,000 ft. from N line of W. W. Pace Sur. ..... T.D. 200 ft.; standing.
Edmiston & Kirby Petroleum Co.'s No. 1 J. W. Ward, Jr., 200 ft. from N and W lines of tract in Dan McKay Sur. ..... T.D. 1,529 ft.; S.D
Johnson & Mattock's No. 1 J. James, 13 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... T.D. 3,000 ft.; pulled in derrick.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,530 ft.; shut down.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 675 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
D. C. DeWitt's No. 1 Gomez, 1,100 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county .. T.D. 1,457 ft.; to drill deeper.
E. J. Hough's No. 1 Hinnant, 150 ft. from S and W lines of Blk. 8, Sur. No. 20 ..... T.D. 3,010 ft.; abnd.
Randado Syndicate's No. 1 Randado townsite, Sur. No. 143 ..... T.D. 2,503 ft.; standing.

JIM WELLS COUNTY

Catlett & O'Neal's No. 2 H. D. Miller, 2,200 ft. N and 83 deg. E of most southwesterly cor. of ranch ..... Location.
F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Rebuilding derrick.
Mid-States Oil & Gas Co.'s No. 1 Wade, C Blk. 3, Wade ranch, NE part of county ..... Location.
S. J. Sloane's No. 1 W. Wade, 150 ft. SW of cen. of NE line of Lot 6, Blk. C of Wade ranch, C. Blanca Sur... T.D. 3,200 ft.; at contract depth.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 1,820 ft.; standing.
Ike Howeth et al's No. 1 D. Pargmann in Victor Blanco Sur. ..... Location.
Nichols Oil Co.'s No. 1 Newberry, 210 ft. S, 60 de. E from Fort Bend Oil Co.'s No. 1 Newberry ..... T.D. 3,300 ft.; S.D.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur.... T.D. 3,422 ft.; drlg sandy shale.

KERR COUNTY

Eastland Oil Co.'s No. 1 Love, 600 ft. E of No. 1 Love in J. Martines Sur. No. 1594 ..... T.D. 1,800 ft.; drlg.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28.... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T D. 110 ft.; standing.

KLEBERG COUNTY

H. Carter et al's No. 1 R. H. Simmons, in Sec. 7, King Sur. No. 2 ..... T.D. 2,205 ft.; standing.

LA SALLE COUNTY

Frank Clark's No. 1 Coleman, 200 ft. from S and E lines of Blk. 16, Sur. No. 514 ..... T.D. 40 ft.; set surface pipe.

LIVE OAK COUNTY

Catlett & O'Neill's No. 1 H. D. Miller, 2,400 ft. from SW line, 6,125 ft. from NW line of Miller ranch in SE part of county ..... T.D. 3,215 ft.; abnd.
J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 592 ft.; S.D. for water.

LEE COUNTY

Paton Bros.' No. 1 C. A. Turner, 150 ft. from N line, 375 ft. from E line of tract in David Hudson Sur., 2 miles SE of Tanglewood ..... T.D. 2,200 ft.; lost hole; skidding rig.

Paton Bros.' No. 1-A Turner, 24 ft. from No. 1 Turner... Skidding rig.

MEDINA COUNTY

James Earle Greenlee's No. 1 J. P. Nixon, 150 ft. S of C of N line of S half of NW of M. Derungs Sur. No. 528 ..... Spudded in.

Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,900 ft. from E line of E. B. Rutledge Sur., southern part of county ..... T.D. 2,100 ft.; drlg.

MILAM COUNTY

Keyser & Nichols' No. 2 Irwin, 65 ft. from No. 1, Levi Taylor Sur. ..... Set csg. 590 ft.

Keyser & Roberts' No. 3 Ward, 125 ft. NE of No. 2 Ward, in Levi Taylor Sur. ..... T.D. 1,100 ft.; S.D.

Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. .. T.D. 1,800 ft.; fishing

SAN PATRICIO COUNTY

John F. Camp's No. 1 W. W. Bennett, C SW of Sec. 8, Geo. H. Paul Subd., J. J. Welder ranch ..... T.D. 523 ft.; set surface csg.

STARR COUNTY

H. D. Carpenter's No. 1 Doyno & Chatfield, 175 ft. from S and E lines of Blk. 7, Share 21, Porcions 80-81, Jurisdiction of Camargo, 1 mile E of Rio Grande City. Abnd. location.

Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 779 ft.; showing gas, setting surface csg.

Frank Dawson's No. 2 R. E. Margo, 632 ft. from N line, 816 ft. from E line of Blk. 5, Share 3-B of Subd. of Porcions 67-72 ..... T.D. 355 ft.; comp. 300,000 ft. gas.

W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Derrick.

H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction Mier ..... T.D. 340 ft.; standing.

Frank LaBorde's No. 1 Juan Marroquin, 1,250 ft. from E line, 1,225 ft. from S line of Share 21 of W two-thirds of Porcion 75 ..... T.D. 620 ft.; standing

Sinclair & Rutherford's No. 1 J. T. Canales, 150 ft. from S and W lines of Share 69 of W half of Porcion 79, Camargo ..... T.D. 420 ft.; drlg.

Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 30, Share 65 of Porcion 80, Jurisdiction Camargo ..... T.D. 190 ft.; drlg.

Stryalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 80, Share 38 .... T.D. 2,384 ft.; drlg.

Stryals Oil Corp.'s No. 1 H. Garza, 500 ft. from E line, 5,280 ft. from N line of Share 26, Partition of Porcions 67-72 ..... Location.

Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 10, 150 ft. from N and E lines of Share 19-A ..... T.D. 360 ft.; standing

Stryalls No. Corp.'s No. 1 Margo, 150 ft. from N and E lines of Share 27 of Subd. of Porciones 80 and 81, Jurisdiction of Camargo ..... T.D. 210 ft.; standing.

R. B. Suttle's No. 1 Guerra, 2,000 ft. to N line, 270 ft. to W line of Porcion 110 ..... T.D. 810 ft.; abnd.

E. L. Williams' No. 1 L. G. Madrigal, 150 ft. from N and W lines of Share 5-A of Porcion 72 of Jurisdiction of Mier ..... T.D. 332 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. ..... T.D. 1,210 ft.; S.D.

Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 900 ft.; S.D.

Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... T.D. 550 ft.; fishing.

WEBB COUNTY

Blair & Livingston's No. 1 J. M. Garcia, 150 ft. from N and E lines of NE NW of Sur. 1,100 ..... Location.

Phillips Rosenberg's No. 1 Green, 245 ft. from S line, 450 ft. from E line of Sur. No. 233 ..... T.D. 2,542 ft.; abnd.

Thompkins et al's No. 1 Ortiz, 200 ft. from E line, 2,000 ft. from N line of Sur. No. 1,808 ..... T.D. 850 ft.; standing.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. ..... T.D. 400 ft.; S.D.

McNeill & Matthews' No. 1 Bachmayer, 300 ft. from E line, 150 ft. from S line of C. C. Browning Sur. ... T.D. 2,000 ft.; standing.

G. B. Peterman's No. 1 Guentzel, 300 ft. from SE line, 867 ft. from SW line of tract in H. Cooks Sur. ..... T.D. 2,565 ft.; abnd.

WILSON COUNTY

A. M. Blume's No. 1-A Nicholson, 105 ft. N, 27 deg. E of No. 1 Johnson ..... Location.

Sun Oil Co.'s No. 1 Tudyk, 650 ft. from W line, 500 ft. from S line of 157-ac. tract in John Turner Sur. .... T.D. 2,840 ft.; abnd.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 580 ft. from SE line of Blk. 27, Porcion 37 ..... T.D. 2,505 ft.; standing.

Joe Cullinan's No. 1 E. Gutierres, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant ..... T.D. 1,495 ft.; drlg.

Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700 ac. of Share A, Charco Redondo grant ..... Set 1 joint of surface casing.

Hunt & Polk's No. 1 H. Ramirez, 7,075 ft. N of S cor. and 2,918 ft. from W line of Share A of Villa grant.. T.D. 820 ft.; standing

T. J. Murray's No. 1 Haynes, 2,915 ft. from NE line, 3,619 ft. from NW line of Comitas grant ..... T.D. 1,422 ft.; abnd.

T. J. Murray's No. 2 Haynes, 5,707 ft. from NE line, 10,933 ft. from NW line of Haynes Pasture, Comitas grant ..... Rigging up.

Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 57 ..... Rigging up.

F. J. Oasenbeck's No. 1 Adelfonso Rameriz, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 ..... Location.

Phillips Rosenberg's No. 3 Laurel, 150 ft. from E line, 1,149 ft. from N line of Lot 10, Sur. No. 271 ..... T.D. 300 ft.; drlg.

H. L. Sargent et al's No. 1 Antonio Gutierres heirs, 922 ft from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ..... T.D. 762 ft.; drlg.

F. J. Searight's No. 1 F. Munoz, 660 ft. from N line and on line between Blocks 31 and 32 of Porcion 18 ..... Rigging up.

Southwest Texas Proven Areas

Week Ending July 9

YOST FIELD—BASTROP COUNTY

Campbell & Tong's No. 8 Yost, 300 ft. SE of No. 7 Yost, A. Garcia Sur. ..... T.D. 1,562 ft.; comp. 5 bbls.

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... Moving in.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 150 ft. from N and E lines of tr. in A. Manachaca Sur. 51.. T.D. 1,216 ft.; drlg.

E. M. Carl's No. 1 F. Gembler, 100 ft. from N line, 750 ft. from E line of tract in J. Montes Sur. ..... T.D. 482 ft.; waiting for rig.

F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm ..... Location.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriges Sur. ..... T.D. 2,223 ft.; sidetracking.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 1-B Walker, 320 ft. from NW line, 150 ft. from NE line of Walker lease, Solomon Seal Sur.. T.D. 2,230 ft.; drlg.

Cole et al's No. 1 Pierce, 400 ft. from NE line, 445 ft. from NW line of Pierce 100-ac. tract in Solomon Seal Sur. ..... Derrick on ground.

Smilock Oil Co.'s No. 1 Dunlap, offsetting Bob Rose's No. 1 Pierce, in Solomon Seal Sur ..... T.D. 2,400 ft.; preparing to shoot.

Trinity Drillers, Inc.'s No. 1 Dunlap, N offset to Bob Rose's No. 1 Pierce in Solomon Seal Sur. ..... T.D. 500 ft.; drlg.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. ..... Derrick.

C. J. Webster Oil & Gas Co.'s No. 1-A McCrory, 75 ft. NW of No. 1 McCrory in John A. Neill Sur. ..... T.D. 2,008 ft.; in chalk.

COLE POOL—DUVAL COUNTY

Cole Petroleum Co.'s No. 76 Benavides, 1,010 ft. from NE lines, 150 ft. from NW lines of Blk. 8, Sec. 19, Cole Subd. of Mariano Arispe grant ..... T.D. 1,753 ft.; set csg.

GOVERNMENT WELLS—DUVAL COUNTY

A. R. Anderson's No. 1 E. Riley, 150 ft. from N line, 250 ft from S line of SW SW of Sur. No. 44 ..... T.D. 2,314 ft.; comp. 200 bbls. on quarter-inch choke.

Buchanan & Terrell's No. 1 R. T. Ellison, 150 ft. from S and E lines of NE NW Sur. 44 ..... T.D. 300 ft.; drlg.

Buchanan & Terrell's No. 2 R. T. Ellison, 510 ft. from E line, 150 ft. from S line of NE NW of Sur. 44 ..... Location.

R. F. Byrd's No. 1 R. T. Wright, 150 ft. from N and W lines of Sur. 101 ..... T.D. 2,292 ft.; setting csg.

H. H. Coffield's No. 2 Wendt, 150 ft. from N and E lines of SE NE, Sur. No. 43 ..... Rigging up.

Humbie Oil & Refining Co.'s No. 4 White, 2,310 ft. from S line, 1,320 ft. from W line of Sur. 58 ..... Rigging up.

Magnolia Petroleum Co.'s No. 1 Johnson, 150 ft. from N and W lines of SW of Sur. No. 44 ..... T.D. 2,331 ft.; comp. 200 bbls. in 11 hrs. on ⅝-in. choke.

Magnolia Petroleum Co.'s No. 2 J. T. Johnson, 150 ft. from S and W lines of NE of Sur. No. 44 ..... Location.

Magnolia Petroleum Co.'s No. 2 Wendt, 150 ft. from S and W lines of NW of Sur. No. 44 ..... Spudded in.

Petroleum Finance Corp.'s No. 1 C. W. Hahl, 150 ft. from N and W lines of SW Sur. No. 46 ..... T.D. 500 ft.; drlg.

Seacord & Putnam's No. 1 Johnson, 150 ft. from S and E lines of NW NW of Sur. 44 ..... Spudded in.

Southwest Drilling Co.'s No. 2 Wendt, 150 ft. from N and E lines of SE of Sur. 43 ..... Location.

The Texas Company's No. 1 Freer, 150 ft. from N and E lines of Sur. No. 45 ..... Derrick.

Whisenant, Trenchard & French Oil Corp.'s No. 1 C. W. Hahl, 230 ft. from S line, 660 ft. from E line of SW SW of Sur. 44 ..... Location.

Windsor Oil Co.'s No. 1 L. L. Cummings, 450 ft. from S line, 150 ft. from W line of E half of NW of Sur. 44 ..... T.D. 2,287 ft.; set csg.

SARNOSA FIELD—DUVAL COUNTY

John F. Camp's No. 2 Weil, 1,300 ft. N, 18 deg. W of No. 1 Weil in Sur. No. 570 ..... Rigging up.

Hynes & Nessly's No. 1 Weil, 2,350 ft. from NE line, 200 ft. from NW line of Sur. 130 ..... T.D. 2,398 ft.; in sand; set csg.

E. R. Thomas' No. 1 Duval County Ranch Co., 150 ft. from NW and NE lines of E of S of Sur. 576 ..... Location.

Smith & Capps' No. 2 Duval County Ranch Co., 2,210 ft. from NW line, 150 ft. from NE line of Sur. 576... T.D. 1,400 ft.; drlg.

Smith & Capps' No. 3 Duval County Ranch Co., 200 ft. from NE and SE lines of N of Sur. 576 ..... T.D. 900 ft.; drlg.

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,660 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. T.D. 4,243 ft.; running tubing.

DARST CREEK—GUADALUPE COUNTY

Humble Oil & Ref. Co.'s No. 5-C Sue Denman, 525 ft. from E line, 600 ft. N of No. 4-C, Wm. Arrington Sur. ..... T.D. 2,515 ft.; going on pump.

Humble Oil & Refining Co.'s No. 6-C Sue Denman, 938 ft. NE of No. 5-C Sue Denman and 400 ft. W offset to Sun Oil Co.'s No. 2 Dowdy in Jacob C. Darst Sur.. T.D. 2,510 ft.; running tubing.

Sun Oil Co.'s No. 2 Dowdy, 500 ft. from N line of tract 700 ft. from W line of tract and survey in Jacob C Darst Sur. ..... T.D. 2,516 ft.; gauged 585 bbls.

LOBO FIELD—LIVE OAK COUNTY

John F. Camp et al's No. 1 Reagan, 3,100 ft. from E line, 21,200 ft. from N line of L. F. Reagan tract .... T.D. 1,633 ft.; drlg.

JACOB POOL McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 1-B Jacob, Sec. 15 G.H.&H. Ry. Sur. ..... T.D. 1,065 ft.; bailing.

Jacob, Buzzini & Pickett No. A-4 Jacob, 880 ft. N 25 deg. W of No. A-3 or 330 ft. from E line, 500 ft. from N line of Sur. 10 ..... T.D. 952 ft.; comp. and shut in; estimated 75 bbls.

Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E. W. B. Scrugham Sur. ..... Moving in.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Two Rivers Ranch, SE cor. of Sec. 59, 5 miles S of Wentz ..... T.D. 830 ft.; drlg.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1 Adams, 420 ft. from S line, 2,000 ft. from W line of F. Mumme Sur. ..... Location.

KING FIELD—NUECES COUNTY

John F. Camp and Stanolind Oil & Gas Co.'s No. 2 King, 660 ft. from S and E lines of Sec. 23 of King Subd... T.D. 4,030 ft.; comp. 40,000,000 ft.; gas.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Bessie Elder, offset to No. 1 Perkins & Gasse, a wild gasser ..... T.D. 2,740 ft.; in sand; comp. 150 bbls.

Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots ..... Derrick.

Gulf Coast Oil Co.'s No. 1 Frank Bliss, 330 ft. from S and E lines of N half of 225-ac. tract ..... Location.

V. B. Hilliegeist's No. 1 McGregor, 150 ft. from W line, 330 ft. from S line of Sec. 311 ..... T.D. 4,875 ft.; comp. 200 bbls.

Kepley et al's No. 2 Roark, 150 ft. from S and W lines of Roark lease ..... Derrick.

McCarthy-Rogers-Nix et al's No. 1 Isencee, 151 ft. from W line, 172 ft. from N line of Blk. 12 of Shepherd farm lots ..... Rigging up.

Saxet Oil Co.'s No. 2 Walton, 200 ft. from S line, 629 ft. from W line, N offset to Sun-Kepley Donegan ..... T.D. 450 ft.; set surface csg.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co.'s No. 4 Welder, 1,900 ft. S, 30 deg. E of No. 3 Welder ..... T.D. 4,591 ft.; testing sand.

LOS OLMOS POOL—STARR COUNTY

Coastal Oil & Gas Co.'s No. 1 Kelsey-Bass, 697 ft. from W line, 873 ft. from N line of NW NW Sec. 5, Subd. of Porciones 75, 76 and 77 ..... T.D. 250 ft.; abnd.

Kirk Cornell's No. 2 Kelsey-Bass, 450 ft. from N and W lines of Sec. 8, Porcions 75, 76, 77 ..... Abnd. location.

Day & Co.'s No. 1 Kelsey Bass, 150 ft. from S line, 400 ft. from W line of W 20 acres of NE NW of Sec. 6, Subd. of Porcions 75, 76, 77 ..... T.D. 600 ft.; abnd.

Hooks & Weaver's No. 7 Kelsey-Bass, 150 ft. from S line, 600 ft. from E line of E 30 acres of NE SW of Sec. 6, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... T.D. 440 ft.; comp. 40 bbls.

Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porciones 75, 76, 77 ..... T.D. 1,400 ft.; standing.
Los Olmos Oil & Gas Co.'s No. 16 Kelsey Bass, 300 ft. from N line, 450 ft. from E line of NE NW of Sec. 7, of Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... Location.
Los Olmos Oil & Gas Co.'s No. 17 Kelsey-Bass, 150 ft. from S and W lines, NW SE of Sec. 7, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo ..... T.D. 465 ft.; in sand.
Los Olmos Oil & Gas Co.'s No. 19 Kelsey-Bass, 450 ft. from N line, 150 ft. from E line of NE NW Sec. 7, Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 482 ft.; comp. 40 bbls.
Los Olmos Oil & Gas Co.'s No. 20 Kelsey Bass, 250 ft. from S line, 600 ft. from E line of SE of SW of Sec. 6, Porciones 75, 76, 77 ..... Spudded in.
Los Olmos Oil & Gas Co.'s No. 21 Kelsey Bass 750 ft. from N line, 650 ft. from W line of NE of NW of Sec. 7, Porciones 75, 76, 77 ..... Rigging up.
Los Olmos Oil & Gas Co.'s No. 22 Kelsey Bass, 450 ft. from S line, 150 ft. from W line of NW SE of Sec. 7, Porciones 75, 76 and 77 ..... Location.
Quien Sabe Oil Co.'s No. 1 Kelsey Bass, 300 ft. from N line, 750 ft. from W line of NE SW Section 8, Porciones 75, 76, 77 ..... Location.
San Marcos Development Co.'s No. 10 Ivy, 100 ft. from E line, 1,200 ft. from N line of Share 8 of Subd. of W two-thirds of Porcion 75, Camargo ..... T.D. 400 ft.; abnd
Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porcions 75, 76, 77 ..... T.D. 420 ft.; drlg.
Snyder et al's No. 1 Powe, 600 ft. from E line, 300 ft. from S line of Share 8, Subd. of N two-thirds of Porcion 75, Camargo ..... T.D. 400 ft.; abnd.

RIO GRANDE CITY POOL—STARR COUNTY

Coastal Oil & Gas Co.'s No. 1 Olivares, 150 ft. from NE and SE lines of easternmost corner of Share 35, Porcion 80, Camargo ..... Derrick.
E. O. Connor's No. 1 Goodrich, 150 ft. from N and E lines of Tract 5, Lot 5, Porcion 81 ..... Rigging up.
Gulf Coast Oil Co.'s No. 1 Frank Doyno, 150 ft. N of C of S line of Blk. 4, Share 77-A, Por. 81, Camargo.. TD. 1,461 ft.; installing pump.
T. J. Heard's No. 1 Block, 150 ft. from S and E lines of Lot 4, Tract 26-A of Por. 80, Jurisdiction Camargo... T.D. 2,000 ft.; standing.
Heard & Swift's No. 1 Frank Doyno, 450 ft. from E line, 150 ft. from S line of Blk. 8, Share 77-A of Porciones 80 and 81 ..... Location.
R. E. Johnson's No. 1 F. H. de Izaguirre, 150 ft. from E line, 450 ft. from N line of Share 36-A, Porcions 80-81, Jurisdiction of Camargo ..... Location.
King Pin Oil Co.'s No. 1 T. C. Lewis, 297 ft. from E line, 111 ft. from S line of Share 22, Porcion 80, Jurisdiction of Camargo ..... Derrick.
Sioux Oil Co.'s No. 3 Goodrich, 150 ft. from N line, 1,150 ft. from W line of Blk. 1, Tract 5, Porcions 80-81, Jurisdiction of Camargo ..... T.D. 1,444 ft.; installing pump.
Edgar Swift's No. 1 Frank Doyno, 472 ft. from E line, 152 ft. from S line of Lot 5, Share 77-A of Porcion 81 ..... T.D. 1,436 ft.; set csg.
Tarver & Nance's No. 1 Seabury et al, 400 ft. from W line, 150 ft. from N line of Tract 21, in Porcion 79, Camargo ..... T.D. 1,988 ft.; drlg.
Traylor-Mundzy-Flowers' No. 1 Frank Doyno, 150 ft. from S and W lines of Blk. 7, Share 76-A, Porcions 80 and 81 ..... Location.
Traylor et al's No. 1 Laborde, 150 ft. from S and W lines of W 20 acres of Lot 6, Tract 5, Porcion 81 .... Rigging up.

AVIATOR POOL—WEBB COUNTY

Frank Clark's No. 1 Puig Bros., 750 ft. from E line, 150 ft. from S line of Straight-S 160-acre tract, Albercas grant ..... T.D. 1,854 ft.; comp. 20,000,000 ft. gas.

CHAPMAN POOL—WILLIAMSON COUNTY

Westbrook Oil Co.'s No. 9-B Lawrence, 240 ft. NE of No. 8-B and 150 ft. from SE line of 37-ac. tr. in S. Miller Sur. ..... Location.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 29 Gutierrez, 150 ft. from NE lines, 925 ft. from SE lines of Share 4, Comitas grant ..... T.D. 1,478 ft.; comp. 125 bbls.
Allied Oil & Gas Co.'s No. 30 Gutierrez, 800 ft. from NE line, 900 ft. from SE line of Share 4, Comitas grant ..... T.D. 1,477 ft.; comp. 75 bbls.
Allied Oil & Gas Co.'s No. 31 Gutierrez, 783 ft. from SE line, 1,139 ft. from NE line of Share 4, Comitas grant ..... T.D. 1,479 ft.; comp. 75 bbls.
H. H. Coffield's No. 3 Santiago Bustamente ,150 ft. from SE line, 150 ft. from NE line of Coffield 80-ac., Share 34, Comitas grant ..... T.D. 1,520 ft.; abnd.
McGinley Oil Corp., No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.
McGinley Corp.'s No. 2 Bustamente, 1,965 ft. from NE line, 150 ft. from NW line of 105.7-acre tract in Share 35, Comitas grant ..... Spudded in.
Shankle, Newton Oil & Gas Co.'s No. 17 F. Cuellar, 510 ft. from SE line, 675 ft. from SW line of Blk. 14, Sur. 65 ..... T.D. 1,248 ft.; comp.; 50 bbls.
S.R.C. Oil Co.'s No. 6-E Trevino, 400 ft. from SW line, 450 ft. from NW line of Block 12, Sur. 65 ..... Abnd. location.
S. R. C. Oil Co.'s No. 12-D Montemayor, 65 ft. from W line, 130 ft. from S line of Blk. 10, Sur. 64 ..... T.D. 1,478 ft.; set csg.
The Texas Company's No. 9 Mesales, 600 ft. from SE line, 125 ft. from SW line of Cerrito Blanco grant .. T.D. 1,193 ft.; comp. 50 bbls.
Trevino Oil Corp.'s No. 2-C Trevino, 150 ft. from W line, 160 ft. from N line of Blk. 15, Survey 412 .... T.D. 1,211 ft.; comp. 80 bbls.
Trevino Oil Corp.'s No. 2-B Trevino, 150 ft. from NW line, 310 ft. from W line of Blk. 14, Sur. 412 ..... T.D. 1,000 ft.; drlg.

CHARCO REDONDO POOL—ZAPATA COUNTY

L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Duke's Subd. of Charco Redondo grant ..... Location.
Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 18, of W. R. Duke Subd., Charco Redondo grant ..... Spudded in.

MARTINEZ FIELD—ZAPATA COUNTY

Newton Drilling Co.'s No. 2 Garza, 225 ft. from N line, 1,000 ft. from W line of Blk. 4, Sur. 161 ..... Spudded in.

Gulf Coast Fields and Wildcats

(Continued from Page 55)

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 23 Moore, Mark Smith Sur., 560 ft. N and 560 ft. W of No. 31 ..... Drlg. gumbo 2,136 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 Booth-Meyers, John Rabb Sur., 1,500 ft. E of No. 2.. Coring sand and shale showing oil 5,212 ft.
Gulf Prod. Co. and Humble O. & R. Co.'s No. 2-A T. I. Booth, Samuel Kennedy Sur., 445 ft. N of S line and 575 ft. E of No. 1-A ..... Cleaning up after gas blowout 4,588 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 2 Davis, Rebt. Peebles Sur., 2,483 ft. E, 150 ft. S of NW cor. of 1,000-ac. tr. ..... Drlg. sand 4,585 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 4 Lockwood, J. Rabb Sur., 3,000 ft. E and 330 ft. N of SW cor. of tract ..... Drlg. shale 1,241 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. E. 300 ft. N of SW cor. of Tr. 3 ..... Drlg. shale and lime 4,246 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 5-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. W, 300 ft. N of SE cor. of Tr. 3 (462.3 ac.) ..... Set liner and screen 5,334 ft.; washing.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 6-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 330 ft. from N line of 469-acre tract ..... Drlg. shale and lime 3,328 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 3-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 300 ft. from N line of Tr. 1 (938.75 ac.).. Location.
The Texas Co.'s No. 1 Wolters (M. H. Gubbels), Samuel Kennedy Sur., 742 ft. from W line, 100 ft. from S line of 100-ac. tract ..... Cored sand showing oil 5,201-61 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 28 Cade, N. Fitzsimmons Sur., 400 ft. S, 150 ft. E from No. 26 ..... Drlg. hard sand 5,830 ft.
Yount Lee Oil Co.'s No. 29 Cade, N. Fitzsimmons Sur., 300 ft. E of No. 27 and 240 ft. N of No. 16 ..... Drlg. sand and lime 5,205 ft.
Yount Lee Oil Co.'s No. 3 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Drlg. sand and shale 4,201 ft.
Yount Lee Oil Co.'s No. 11 Smith, Martin Dunman Sur., 130 ft. E of No. 3 and 440 ft. N of No. 5 ..... Drlg. sand and lime 4,710 ft.
Yount Lee Oil Co.'s No. 2 Nellie League, Martin Dunman Sur., 230 ft. N of No. 1 and 300 ft. E ..... Drlg. hard sand 4,725 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 146-A Cotton ..... Comp. pumping 3 bbls. net oil 581 ft.
Rio Bravo Oil Co.'s No. 36 "J" lease ..... Spudded.

HUMBLE—HARRIS COUNTY

J. D. Clay's No. 1 Bender, Robert Dunman Sur., 200 ft. from W line and 100 ft. from S line of 100-acre tract ..... Cap rock 1,283-97 ft.
Sun Oil Co.'s No. 54 River, Robert Dunman Sur., 50 ft. from E line and 395 ft. from S line ..... Oil sand 1,420 ft.; cmtd. csg.
The Texas Co.'s No. 26 House, Mary Owens Sur., 100 ft. W of No. 20 ..... Drlg. sand, shale and boulders 3,288 ft.
The Texas Company's No. 25 Wheeler & Pickens (W.O.).. T.D. 1,751 ft. in cap rock; trying to cement off old hole at 1,496 ft. and set screen.
E. M. Wilson's No. 10 W. & P.-Texas fee, 50 ft. E line, 40 ft. from N line of Blk. 23, J. B. Stevenson Sur... Rig.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 35 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1 ..... Drlg. gumbo 2,327 ft.
Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur. No. 44, 1,900 ft. S and 200 ft. W of NE cor. of "A" lease ..... Set 74 ft. of 3-in. screen 4,526 ft.; comp. flowing 25 bbls. P.L. oil hourly through 1-in. choke, 235 lbs. pressure.
Rio Bravo Oil Co.'s No. 25-A Settegast, J. Kopman Sur. No. 44 (location check to come) ..... Derrick.
S. B. Ward's No. 1 Mowery, J. Hamilton Sur. No. 52, 300 ft. from W line, 60 ft. from N line of 24-ac. tr... Drlg. water sand 1,220 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 2 Minnetex, 125 ft. from W line and 100 ft. from S line of Lot 251, Wm. Lovett Sur. ..... Pulling screen to deepen 4,854 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract ..... No report.
Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... No report.
Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line ..... Rigging up.
Eclipse Oil Co., No. 2 Barrow, Jesse Devore Sur., 55 ft. W, 35 ft. S of most easterly NE cor. 3.7-ac. tract.... T.D. 4,960 ft.; sand 4,872-4,920 ft.; fishing swab.
Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract ..... Derrick.
Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Spudded and shut down.
D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... T.D. 4,553 ft.; sidetracked at 2,950 ft.; drlg. shale 3,302 ft.
D. & L. Prod. Co.'s No. 3 Mecom & Layton, Jesse DeVore Sur., 80 ft. from S line, 60 ft. from W line of 3-ac. tr. ..... Derrick.
Healey & Southerland's No. 1 Findley, Jesse DeVore Sur., 50 ft. from E line and 100 ft. from N line of 4-ac. tr. ..... Drlg. gumbo 1,725 ft.
Houston Prod. Co.'s No. 1 Baldwin, Jesse DeVore Sur., 222 ft. from S line and 50 ft. from E line of 5-acre tract ..... Derrick.
Republic Prod. Co.'s No. 51-A Dolbear, Jesse DeVore Sur., 35 ft. N of No. 55 ..... Drlg. hard sand 2,022 ft.
Republic Prod. Co.'s No. 146 Dolbear, Jesse DeVore Sur., midway between and in line with Nos. 18 and 86 .. Drlg. gumbo 1,120 ft.

MARKHAM—MATAGORDA COUNTY

Harvey Smith et al's No. 1 W. H. Gray (W.O.), Wm. Hadden Sur., 400 ft. from S line, 150 ft. from E line of Blk. 2 ..... Set 15 ft. of 4½-in. screen 3,623 ft.; tested S.W.; pulling screen.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 3 Stark, 350 ft. E, 100 ft. N of SW cor. of Marshall Beauchamp Sur. ..... Coring sand and shale showing oil 3,481 ft.

ORANGE—ORANGE COUNTY

Orange Pet. Co.'s No. 13 Chesson (W.O.) ..... No report.
Sun Oil Co.'s No. 1 Bellie (D.D.) ..... No report.

REFUGIO—REFUGIO COUNTY

E. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River ..... Sand showing oil 9,131 ft.; cmtd. 5½-in. csg. and 100 ft. screen (one string); drlg. plug to test.
Houston Oil Co.'s No. 2 F. Rooke (W.O.), T. Mullen Sur.. Sand showing oil 3,696-3,710 ft.; set combination string of csg. and screen.
Larco Gas Co.'s No. 5 Strauch, Refugio Town tract, Lot 6, Blk. 2, 100 ft. W of No. 2 ..... Shut down awaiting orders.

CLAY CREEK—WASHINGTON COUNTY

Nicholson Oil Corp.'s No. 1 Bimage, C of E½ of J. F. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-ac. tract ..... No report.
John Walker et al's No. 1 Henry Wendt, J. F. Perry Sur., 150 ft. from SW line and 405 ft. from SE line of tract ..... No report.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Ratliff, Seiss & McLean's No. 2 Crusel (W.O.), 50 ft. S and 50 ft. W of NE cor. of Sec. 42-9s-2w ..... Drlg. sandy shale 1,585 ft.
Reliable Oil Co.'s No. 1 Haber, 50 ft. N and 50 ft. W of SE cor., Lot 4, Blk. 12, Sec. 46-9s-2w ..... Sand and shale 1,909-27 ft.; pumped S.W.; shut down.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 12-9s-7w ..... Drlg. shale 3,112 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Lillard (W.O.) ..... T.D. 2,530 ft.; S.D.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 9 Bordages (W.O.), 319 ft. N and 90 ft. E of SW cor. of NW NE Sec. 8-10s-9w ... Drlg. sandy shale 6,546 ft.
Magnolia Pet. Co.'s No. 4 Frieberg & Wolf (W.O.) ..... Pulling screen to deepen 3,129 ft.
Union Sulphur Co.'s No. 3 Martha Moss, 300 ft. W, 150 ft. S, NE cor. NW SE, Sec. 8-10s-9w ..... Tested S.W. 5,300 ft., drlg. deeper.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 751 fee (D.D.), Sec. 29-9s-10w .. Salt 4,344-4,494 ft.; sidetracked to 3,319 ft.; shut down.
Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w ..... Salt 6,053 ft.; sidetracked 3,242-4,628 ft.; drill stem stuck.
Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w ..... Location.
Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w ..... Location.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3 ..... Rig.
Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W, 262 ft. N, SE cor. SW NE, Sec. 33-10s-12w ..... Fishing drill pipe 3,667 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 34 Watkins, 435 ft. E, 430 ft. S, NW cor., Sec. 24-12s-10w ..... Drlg. hard sand 2,890 ft.
Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Spudded.
Moon Oil Co.'s (R. E. Seiss') No. 1 Breaux, 1,300 ft. N, 150 ft. E of NW cor. of 61-ac. tr., Blk. 26, Sec. 46-12s-10w ..... Drlg. 3,825 ft.
Moon Oil Co.'s No. 6 Sanner, 1,550 ft. N and 675 ft. E of SW cor. of Sec. 28-12s-10w ..... Derrick.
Pap Oil Co.'s No. 1 Ellender, 617 ft. N and 931 ft. W of SE cor. NE, Sec. 19-12s-10w ..... Drlg. gumbo 800 ft.
Sultex Oil Co.'s No. 1 Dorion, 181 ft. W, 12 ft. N of junction of W line of Sec. 46-12s-10w and S bank of Kelso Bayou in Sec. 36 ..... T.D. 4,328 ft.; dry and abnd.
J. D. Sutton's No. 7 Irwin, 1,320 ft. N and 1,490 ft. W of SE cor. of Sec. 13-12s-10w ..... Set 3 jts. 4½-in. screen 3,070 ft.; swabbed S.W.
The Texas Co.'s No. 9 State, 2,329 ft. N, 918 ft. E from SE cor. Sec. 13-12s-10w, in 12s-9w ..... Drlg. 3,510 ft.
The Texas Co.'s No. 10 State, 2,375 ft. N, 564 ft. E, SE cor. Sec. 13-12s-10w, in Twp. 12s-9w ..... Location.
Union Sulphur Co.'s No. 2 Gulf Land (Humble lease), 661 ft. E and 810 ft. N of SW cor., Sec. 12-12s-10w. Drlg. shale and lime 5,940 ft.
Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,958 ft. N, 400 ft. W of SE cor., Sec. 11-12s-10w ..... Sand showing oil 8,316-24 ft.; fishing drill pipe.
Yount Lee Oil Co.'s No. 11 School land, 2,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w ..... Drlg. sand and shale 3,650 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 21 United Land Co., 3,038 ft. E and 690 ft. N of SW cor. of Sec. 15-10s-4e ..... Derrick.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Location.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 5 L.L.&E., 2,888 ft. S, 105 ft. E of NW cor. of Sec. 26-21s-22e ..... Drlg. sandy shale 3,620 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... Drlg. shale 1,980 ft.
O'Hara Oil & Gas Co.'s No. 1 Neilius, J. C. Cummings Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek ..... Derrick.

BRAZORIA COUNTY

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Sand 3,273-85 ft.; drill stem test dry.
J. R. Ingram's No. 2 Levitt, John Peske Sur., 75 ft. NW of No. 1 ..... Standing 2,185 ft.
Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 63° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Rigging up.
The Texas Company's No. 3 Belcher, Manvel, Harvey N. Little Sur., 1,220 ft. southwesterly and 200 ft. southeasterly out of N cor. of Belcher lease ..... Drlg. clay 162 ft.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... Drlg. 655 ft.
E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... Drlg. sticky shale 900 ft.
Marek & Son's No. 3 A. Marek, N. McFaddin Sur., 1,068 ft. N and 225 ft. W of SE cor. of tract ..... Standing 2,210 ft.
M. O. & T. Corp.'s No. 1 Rogers ..... Shut down 2,710 ft.
Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 8, P. Singleton Sur. ..... Shut down 2,648 ft.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 31 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Sur., Sec. 43 ..... Sand showing gas 4,024 ft.; drill stem test showed 600 lbs.; set 7-in. csg. and 1 jt. screen (one string).
Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 26, Q. K. Winn Sur. .. Drlg. shale 2,046 ft.

FORT BEND COUNTY

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. .... Drlg. gumbo 3,900 ft.
Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line, 1,892 ft. from NE line ..... No report.

GALVESTON COUNTY

H. H. Stevenson's No. 1 Lobit, J. F. Perry and E. M. Austin Sur., 250 ft. N of Dickinson Bayou, and 250 ft. W of E line of E. Lobit 23-ac. tr. ..... Shut down 600 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Shut down 1,868 ft.

HARDIN COUNTY

W. R. Alexander et al's No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur.. Spudded and shut down.
Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. ..... Shut down for fuel 1,935 ft.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... D.S. stuck 547 ft; standing.
Crown-Framer Oil Co.'s No. 1 Woodburn, Genoa, August Whitlock Sur., 200 ft. out of NW cor. of tr. .. Derrick.
Crown-Framer Oil Co.'s No. 2 Woodburn, 1,400 ft. S, 400 ft. E of NW cor. August Whitlock Sur. ..... Cmtd. 10-in. csg. 235 ft; T.D 239 ft; standing.
John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. Drlg. sand and shale 600 ft.
H. D. Morse et al's No. 1 Schlveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Spudded.
Suma Oil Co.'s (Lucket et al's) No. 1 Wilson & Hunt, Wm. Ritchie Sur., 200 ft. from S line and 500 ft. from W line of 50-acre tract ..... Drlg. sand and shale 1,589 ft.

JASPER COUNTY

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... Shut down 4,350 ft.
Rio Neches Oil Co.'s No. 3-A Boykin, SE cor. of M. Rackie Sur., N of No. 2-B ..... Abnd. 1,295 ft.
Rio Neches Oil Co.'s No. 4-A Boykin, M. Rackie Sur., 400 ft. E of No. 3-A ..... Spudded.

JEFFERSON COUNTY

Elam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,855 ft.

LIBERTY COUNTY

Bain-Rheubotham's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Shut down 700 ft.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... Shut down 2,610 ft.
Shepherd's Mott Salt Dome Oil Co.'s No. 1 Hawkins, Shepherd's Mott, 5,268 ft. from N line and 1,320 ft. from E line of B. McCarthy Sur. ..... Drlg. shale 2,112 ft.
United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... Fishing 7,838 ft.

MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 South Tex. Dev. Co., center of Blk. 47, in southeast Alex McCown Sur. ..... Drlg. sticky shale 3,285 ft.
Ed Falvey et al's No. 1 McComb, L. Smith Sur., 330 ft. from N and W lines of 160-ac. tract ..... Derrick.
Gohlson Bros. and Rycade Oil Corp.'s No. 1 Drought, 3,340 ft. along N line of Kronkrite Sur., from NE cor., thence 250 ft. S at right angles ..... Drlg. shale and streaks of sand 3,812 ft.
Heep Oil Corp.'s No. 1 Brent, D. W. Collins Sur., 330 ft. from S line in center east and west of 209-ac. tr.. Drlg. sticky shale 3,305 ft.
Heep Oil Corp.'s No. 1 Cartwright (D.D.), 2,861.6 ft. southerly along W line of John O. Davis Sur. from NE cor. and thence 450 ft. E ..... Cutting and pulling screen to deepen 5,078 ft.
Heep Oil Corp.'s No. 2 Cartwright Sur., John Davis Sur., 330 ft. from S line, 400 ft. from E line of tr... Drlg. gumbo 1,165 ft.
Houston Oil Co.'s No. 1 Hamman, Charles B. Stewart Sur., 450 ft. from N and W line of 232.5-ac. tr. .... Drlg. shale 4,325 ft.
Humble Oil & Ref. Co.'s No. 1 C. L. Dobbins, Ransom House Sur., 425 ft. from N line and 466 ft. from W line of tract ..... Derrick.
Humble Oil & Ref. Co.'s No. 4 South Tex. Dev. Co., 1,900 ft. N from SE cor. of T. C. Rowell Sur., thence 466 ft. W at right angles ..... Derrick.
Kraft & Gesieke's No. 2 South Tex. Dev. Co., center T.&N.O. Sur., Blk. 5 ..... Location.
Kraft & Gesieke's No. 1 South Tex. Dev. Co., T.&N.O. Sur., Blk. 9 ..... Coring shale 4,214 ft.
Moore et al's No. 1 Burton, I.&G.N. Sur., 660 ft. out of NE cor. 46-acre tract ..... Moving in.
Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,326 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.
Plummer & McDaniel's No. 1 South Tex. Dev. Co., Theo. Slade Sur., 330 ft. from S and E lines of 60-ac. lease, in Lot 103 ..... Drlg. gumbo 2,117 ft.
Rowe & Flowers' No. 1 Varner, R. House Sur., 330 ft. out of NE cor. of 33-ac. tr. ..... Drlg. shale 4,310 ft.
Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... Drlg. shale 4,155 ft.
C. C. Steinberger et al's No. 1 Steinberger, John Davis Sur., 450 ft. from N and W lines of the 250-ac. tract.. Drlg. gumbo 1,715 ft.
Strake Oil Corp.'s No. 3 South Tex. Dev. Co., 2,475 ft. from W line and 790 ft. from S line of Theo. Slade Sur. ..... Drlg. sticky shale 2,985 ft.
R. H. Vice's No. 1 S. L. Ross, Jose Maria De La Garza Sur., 1,777 ft. N and 344 ft. E of SW cor. 97-acre tract ..... Derrick.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... Shut down 350 ft.
Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,325 ft. from W line of F. Stoevar Sur. No. 4 ..... Moving in.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Trying to set screen 4,808 ft.

POLK COUNTY

Collins & Plummer's No. 2 Collins, Augustine Viesca Sur., 310 ft. S of No. 1 in F. E. Chase 25-ac. tract... Dry and abnd. 5,260 ft.
Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Rig.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 1 J. O'Connor, C.E.P.I.&M. Sur., 1,200 ft. from S line and 1,500 varas from E line of tract ..... Drlg. gumbo 1,475 ft.
Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Drlg. shale and lime 5,291 ft.
Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 3,158 ft. W of E line at right angles ..... Drlg. shale 5,516 ft.

TRINITY COUNTY

C. N. Beckner's No. 1 Mangum, J. A. Henderson Sur., 200 ft. out of NE cor. 80-acre tract ..... Location.
Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of I.&G.N. Sur., No. 47 ..... S.D. 3,556 ft.

VICTORIA COUNTY

Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 300 ft. E of No. 1 ..... Drlg. shale 5,575 ft.
Cullen & West's No. 1 Keeran ranch, Martin DeLeon Sur., 450 ft. from S line, 450 ft. from W line of tr. .. Drlg. sand and shale 5,420 ft.
Houston Oil Co.'s No. 1-A McFaddin, 200 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... Fishing 20 fourbles drill stem; T.D. 5,292 ft.
Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Sand showing gas 2,096 ft. to make drill stem test; shut down for high water.
The Texas Company's No. 4 McFaddin, 86 deg. E, 1,728½ ft. from NE cor. of Andrew J. Gray Sur. in John M. Rine Sur. ..... T.D. 2,840 ft.; sidetracked 1,050-2,011 ft.; blew out; pumping mud.
Union Oil Co.'s No. 1 Keeran, 4,166 ft. SW along SE line of Gulf Prod. Co.'s 2,500-ac. lease from most easterly cor., thence 1,390 ft. SE at right angles in Martin DeLeon Sur. ..... Drlg. sticky shale 3,557 ft.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Drlg. shale 836 ft.
Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,245 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down 2,090 ft.

Geo. F. Kerr's No. 1 Smithers Bros., S. Manning Sur.....Shut down 2,240 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 160-acre tract ..... No report.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract .....Derrick.

SOUTH LOUISIANA

ASCENSION PARISH

Rio Bravo Oil Co.'s No. 1 Community Lease, Darrow. 200 ft. from N line and 1,500 ft. E at right angles from SW cor. of Sec. 15-10s-2e .....Rigging up.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-2s-9w .....Gumbo 835 ft.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w..Sand showing oil 6,619-22 ft.; cmtd. 6⅝-in. csg.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 200 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-2e .....Shut down 1,420 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 912 ft. N and 150 ft. E of SW cor. Sec. 54-12s-7e .....Standing 2,982 ft.

IBERVILLE PARISH

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw. 2,040 ft. N and 400 ft. W of C of Sec. 52-9s-11e .....Salt 4,203-38 ft.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 2 Cockrell-Moran, Sec. 14-20-26e, 1,218 ft. N and 4,396 ft. E of station .....Sulphur test.

Lake Washington-Freeport Sulphur Co.'s No. 1 Louisiana State, 598 ft. N and 1,229 ft. E of station .....Sulphur test.

POINTE COUPEE PARISH

Grand Bay Oil & Gas Co.'s No. 1 Moniotte, 10,140 ft. S and 13,450 ft. E of NW cor. Twp. 5s-11 in Sec. 34... Shut down 310 ft.

TERREBONNE PARISH

Freeport Sulphur Co.'s No. 3 Wurzlow (Bay St. Elaine), 1,132 ft. from W line, 1,530 ft. S of NE cor. of Sec. 17-22s-18e .....Abnd sulphur test.

The Texas Company's No. 7 State-Lake Pelto, 2,216 ft. N, 104 ft. W of SE cor., Sec. 8-23s-18e ..... Derrick.

The Texas Company's No. 4 State-Lake Barre (D.D.), 1,900 ft. S and 600 ft. E of NW cor., Sec. 30-21s-20e..Set 45 ft. of 3-in. screen 3,822 ft.; comp. flowing 297 bbls. net oil, 65 per cent S.W., ½-in. choke.

The Texas Co.'s No. 14 State Lake Barre, 400 ft. S. 850 ft. W. NW cor. Sec. 30-21s-20e, in Sec. 37-21s-19e .....T.D. 3,793 ft.; sand 3,759-65 ft.; comp. flowing 2,000 bbls. P.L. oil, ½-in. choke.

The Texas Co.'s No. 16 State-Lake Barre, 1,500 ft. S. 150 ft. E of NW cor., Sec. 30-21s-19e .....Derrick.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Mulvey Irrigation (Gueydan), 1,-176.9 ft. from N line and 2,252.5 ft. from W line of Sec. 34-11s-1w .....Drlg. sand and shale 2,112 ft.

VERNON PARISH

Minerals Division Iiano Co.'s No. 1 Liano Del Rio, 542 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-2n-9w .....Drlg. sand and shale 697 ft.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 51-1s-14w... Shut down 2,449 ft.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 53)

La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11.....Spudded and S.D. 50 ft

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e..... S.D. 2,515 ft.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 406 ft. N, 200 ft. W, SE cor. NE NE, Sec. 35-8-13 .....Set 10-in. at 100 ft.

J. H. Askew's No. 1 Sabine Lbr. Co., NE NE, Sec. 9-7-13.Testing 2,455 ft.

R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE ..... Drlg. 2,000 ft.

R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 .....Location.

F. M. Burke's No. 1 Gray, 454 ft. N, 265 ft. W, SE cor. SW SW, Sec. 3-7-13 .....Drlg. 1,876 ft.

Bob Chew's No. 1 O. Gray, 330 ft. N and E, SW cor. SW NW, Sec. 35-8-13 .....Location.

Cliff Oil Co.'s No. 1-A Martines School, 720 ft. N, 105 ft. W, SE cor. NE SE, Sec. 4-7-13 .....Set 6-in. 2,052 ft.

W. M. Coates' No. 1 Gray, 330 ft. N and W, SE cor. SW, Sec. 3-7-13 .....Location.

W. M. Coates' No. 2 Gray, 330 ft. S and W, NE cor. SE SW, Sec. 3-7-13 .....Location.

Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-13 .....W.O.S.R. 2,465 ft.

Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 .....Location.

The Coming Oil Co.'s No. 1 Cobb, 330 ft. N and E, SW cor., Sec. 14-7-11 .....Derrick.

Craig et al's No. 1 Travis, Sec. 13-7-11, 200 ft. S and E, NW cor. SE NW .....W.O.S.R. 2,580 ft.

Crescent Drlg. Co.'s No. 1 Williams, 370 ft. E, 330 ft. S, NW cor. N½ SW, Sec. 21-7-13 .....Location.

Crescent Drlg. Co.'s No. 2 Williams, 330 ft. S and W, NE cor. SE NW, Sec. 21-7-13 .....Location.

Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 .....Derrick.

R. E. Davidson's No. 1 Davis, 400 ft. S, 125 ft. E, NW cor., Sec. 28-7-11 .....Derrick.

William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 35-8-13 .....Derrick.

B. A. Ferrell's No. 1 Haley, Sec. 4-7-12, 300 ft. S and E, NW cor. NW SW..... Testing 2,150 ft.

Harry Flinchbaugh's No. 1 Sepulbedo, 250 ft. N and E, SW cor. SE NE, Sec. 4-7-13 .....Testing 2,197 ft.

R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S. 300 ft. W, NE cor. NW NW, Sec. 10-8-13.....Coring lime 6,007 ft.

R. L. Gay, tr.'s No. 11 Bowman-Hicks, 330 ft. N and W, SE cor., NE NE, Sec. 14-7-14 .....Testing 2,325 ft.

J. I. Hall's No. 1 Williams, SE NW, Sec. 8-7-10 ..... T.A. 2,631 ft.

Vick Hammond's No. 1 Eisenack, SE cor. NW SW, Sec. 3-7-13 .....Location abandoned.

W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE, Sec. 36-8-12 .....Rigging up.

Howard et al's No. 1 Williams, 300 ft. N and E, SW cor. SE NW, Sec. 13-7-11 .....W.O.S.R. 2,580 ft.

J. B. Huges' No. 1 Stille, 283 ft. N, 383 ft. W, SE cor. SE SW, Sec. 35-8-11 .....S.D. for water 1,957 ft.

Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 .....Rigging up.

O. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 .....Location.

J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13...Dry and abandoned 1,743 ft.

A. D. King, tr.'s No. 1 Davis, 170 ft. N, 410 ft. E, SW cor. NW NE, Sec. 29-7-11 .....Location.

A. D. King, tr.'s No. 1 Germain, Sec. 7-7-10, 330 ft. E, 518 ft. N, SW cor. NE NE.....Tested dry 2,685 ft.

A. D. King, tr.'s No. 1 T. L. Andries, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11 .....Derrick.

A. D. King, tr.'s No. 1 J. J. Andries, 140 ft. S, 240 ft. W, NE cor. SE SW, Sec. 15-7-11 .....Tested dry 2,677 ft.

S. A. Lane et al's No. 1 DeKeyser, 233 ft. E, 330 ft. S, NW cor. NE, Sec. 23-7-11 .....Tested dry 2,819 ft.

Geo. LeGrand's No. 1 McGough, Sec. 3-8-10..... S.D. 1,450 ft.

Hill Myers' No. 1 Garcia, 200 ft. N and W, SE cor. SW NW, Sec. 4-7-13 .....S.D. for water 1,200 ft.

E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11.....W.O.S.R. 2,541 ft.

Neely et al's No. 1 C. Henry, Sec. 23-7-11 .....Derrick.

C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. .....W.O.S.R. 2,509 ft.

C. D. Neff, tr.'s No. 1 Peterson, 200 ft. N and E, SW cor. NW NW, Sec. 36-8-13 .....Testing 2,075 ft.

Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE.....Location.

Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11.....Location.

Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10.....Derrick.

J. H. Reeves' No. 1 Sabine State Bank, NE SW, Sec. 28-8-11 ..... Testing 2,500 ft.

Otis A. Roberts' No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 .....Derrick.

Otis A. Roberts' No. 2 S. S. Martinez, 312 ft. E, 25 ft. S, NW cor. SE NE, Sec. 4-7-13 .....Location.

Otis A. Roberts' No. 1 Sabine Lbr. Co., 224 ft. S, 481 ft. W, NE cor. SW NE, Sec. 5-7-13 .....Location.

Bill Rowe's No. 1 Sepulbedo, 530 ft. N, 200 ft. E, SW cor. SE SE, Sec. 4-7-13 .....Rigging up.

Sculley & Black's No. 3 Lafitte, 1,400 ft. S, 133 ft. W, NE cor. NW NW, Sec. 13-7-11 .....Location.

Service Drlg. & Royalties Co.'s No. 2-A Gardner, 330 ft. N, 300 ft. E, SW cor. NE NE, Sec. 12-7-11.....Dry and abandoned 2,850 ft.

Skully & Beach's No. 2 Lafitte, 149 ft. S, 228 ft. E, NW cor., Sec. 13-7-11 .....S.D. 1,500 ft. for water.

H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW.....Location.

W. W. Smith et al's No. 1 Sepulbedo, 230 ft. N, 250 ft. W, SE cor., Sec. 4-7-13 .....Drlg. 1,500 ft.

Sneed & Sneed's No. 1 Pearce, 200 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 .....Drlg. 2,150 ft.

Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11.....S.D. 1,905 ft.

Southland Drlg. Co.'s No. 2 F. Martinez, 330 ft. N and W, SE cor. W½ SE, Sec. 34-8-13 .....Dry and abandoned 2,527 ft

H. B. Stacey et al's No. 1 Hefkobits, 457 ft. N, 583 ft. E, SW cor. SE, Sec. 34-8-13 .....Derrick.

State Prod. Co., Inc.'s No. 1 Davis, Sec. 17-7-10, 150 ft. N and E, SW cor. SW NW.....Dry and abandoned 3,102 ft.

State Prod. Co., Inc.'s No. 1-B Davis, 200 ft. N and E, SW cor., Sec. 17-7-10 .....Derrick.

Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 .....Rigging up.

B. E. Taylor's No. 1 Gay, 232 ft. S, 476 ft. E, NW cor. SE SW, Sec. 36-8-13 .....Location.

B. E. Taylor's No. 1 Wooley, 330 ft. N and E, SW cor. SE SW, Sec. 36-8-13 .....Location.

A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 300 ft. N, SW cor. NW.....W.O.S.R. 2,600 ft.

A. F. Tarver's No. 1 R. Stoker, 1,980 ft. S, 1,320 ft. W, NE cor., Sec. 34-8-10 .....Set 6-in. 2,823 ft.

Thornton et al's No. 2 S. S. Martinez, 312 ft. E, 205 ft. S, NW cor. SE NE, Sec. 4-7-13 .....Location.

A. A. Trammell's No. 1 Sepulbedo, 330 ft. N and W, SE cor. NW NE, Sec. 5-7-13 .....Derrick.

W. C. Turnbow's No. 1 Williams, 200 ft. W C E line SW NW, Sec. 13-7-11 .....Location.

W. C. Turnbow's No. 2 Williams, 178 ft. S, 200 ft. E NW cor. SW NW, Sec. 13-7-11 .....Set 10-in. 104 ft.; S.D. 237 ft.

Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 .....Set 10-in. 100 ft.

C. C. Walker's No. 1 Noble-Neely, 330 ft. S and E, NW cor. SW, Sec. 36-8-13 .....Rigging up.

Williams & Spiers' No. 1 Williams, Sec. 31-8-10, SE cor. SE SW..... Set 6-in. 2,332 ft.

Wurtsbaugh & Torren's No. 1 Peterson, 330 ft. N and W, SE cor. SW NE, Sec. 26-8-13.....Location.

Wurtsbaugh & Torran's No. 1 Peterson, 330 ft. N and SE cor. SE NW, Sec. 35-8-13 .....Set 10-in.; drlg. 1,200 ft.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12.....S.D. 3,545 ft.

VERNON COUNTY

Liano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ..... Drlg. 1,060 ft.

WINN PARISH

Tex Lloyd's No. 1 Milam, C NW SW, Sec. 28-13-3..... Location.

ARKANSAS

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-8 .....1,253 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12.....Rigged up and S.D

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15.....S.D. 2,575 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW.....Drlg. 2,376 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16.....S.D. 1,340 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7.....Fishing for drill stem 2,800 ft.

LITTLE RIVER COUNTY

Harrell et al's No. 1 Taffee, 32 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12s-32w .....Derrick.

MILLER COUNTY

C. E. Litchfield's No. 1 Hervey, 525 ft. S, 350 ft. W, NE cor. NE NW, Sec. 2-15-26.....T.A. 2,885 ft.

Fitzwater et al's No. 1 E. A. McCowand, NW cor. NW SE, Sec. 22-15-28 .....Location.

Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW, Sec. 20-15-27 .....Derrick.

Fitzwater et al's No. 1 Beck, Sec. 33-15-26..... Set 6-in. 2,919 ft.

W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 .....S.D; W.O. 2,600 ft.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-15-17..W.O.S.R. 2,208 ft.

McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW.....S.D. 102 ft.

Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-13-18 .....Set 10-in. 63 ft.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24.....S.D.; W.O. 1,020 ft.

E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23..... Rigging up on new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 3-4n-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-8-22, S½ SW.. S.D. 950 ft.

ST. FRANCIS COUNTY

Field & Jones' No. 1 F. M. White, Sec. 1-4n-2e, SW cor. NW ..... Drlg. 3,250 ft.

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. 1,370 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 3-16-16 ..... Derrick.

H. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... S.D. 2,875 ft.

Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.

Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32..... S.D. 1,725 ft.

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30..... S.D. 1,870 ft.

EAST TEXAS

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.

Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 53-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.

C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.

John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur. ..... S.D. 4,195 ft.

M. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur.. S.D. 85 ft.

Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor., T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Derrick.

Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

M. M. Howard's No. 1 Hussey, Chas. Lockhart Sur. ..... Arranging to abandon 2,831 ft.

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E. SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... T.A. 3,996 ft.

Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur... S.D. for D.S. 740 ft.

J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 3,055 ft.

SHELBY COUNTY

K. H. Francis' No. 1 John Mims, Mary Smith Sur. .. .. Rigged up on new hole.

General Minerals Co.'s No. 2-B Holt, Matthew Moore Sur. S.D. 3,951 ft.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... S.D. 2,740 ft.

Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Rigged up on new hole.

McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. ..... S.D. 3,393 ft.

Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Burleson Sur... S.D. 505 ft.

Ridgeway et al's No. 1 Polley, Dominguez Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... Set 8-in. 1,937 ft; T.D. 1,949 ft.

Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D.; W.O. 1,768 ft.

Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.

Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... Fishing D.S. 2,033 ft.

Louisiana-Arkansas Proven Areas

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, well, farm name, section and block—	Remarks:
Louisa Oil & Gas Co.'s No. 1 Cushman, 1,380 ft. N. 600 ft. E, SW cor., Sec. 33-19-16	Spudded in.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50	Location.
J. J. Potts, trustee's No. 2 Robertson-Reid, 531 ft. N. 825 ft. E. SW of Sec. 11-18-4e	Set 6-in. 2,162 ft.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulton, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13	Location.
Abbott & Rankin's No. 1 Towley, 330 ft. S and E, NW cor. SE NW, Sec. 1-7-13	Location.
Baird Bros.' No. 1 S. Martinez, 122 ft. E, 476 ft. S, NW cor. NE SW, Sec. 2-7-13	Cmtd. back to 2,405 ft.
Coates Pet. Co.'s No. 2 S. S. Martinez, 347 ft. S, 330 ft. E, NW cor. NE SE, Sec. 3-7-13	Flowing 3,000 bbls. 2,265 ft.
Dengall O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13	Set 10-in. 100 ft.; drlg. 450 ft.
Dengall O. & G. Co.'s No. 1-G Nulton, 350 ft. N, 330 ft. W, SE cor. NE NE, Sec. 3-7-13	W.O.S.R. 2,419 ft.
Dengall O. & G. Co.'s No. 2-G Nulton, 330 ft. N and E, SW cor. NE NE, Sec. 3-7-13	Set 10-in. 102 ft.; drlg. 1,700 ft.
Edwards & Hubien's No. 1 Martinez, 855 ft. E, 541 ft. N SW cor., Sec. 2-7-13	Location.
J. E. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11	Set 6-in. 2,338 ft.
D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11	Location.
H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11	Derrick.
W. F. Lacey's No. 1 Hughes, 330 ft. S and E, NW cor. E½, Sec. 10-7-11	Derrick.
W. F. Lacey's No. 2 Hughes, 40 ft. N, 106 ft. W, SE cor. NW SW, Sec. 11-7-11	Set 6-in. 2,407 ft.
Lanier et al's No. 2 Newton, 400 ft. N, 330 ft. W, SE cor. NW, Sec. 3-7-13	Set 10-in. 104 ft.
Lion Oil Ref. Co.'s No. 1 LaRoux, 348 ft. N, 330 ft. E. SW cor. S½ NE SE, Sec. 3-7-13	Set 6-in. 2,074 ft.
Lion Oil Ref. Co.'s No. 2 LaRoux, 384 ft. S and W, NE cor. SW SE, Sec. 3-7-13	Location.
Loring Oil Co.'s No. 18 Bowman-Hicks, 1,280 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12	Coring 5,279 ft.
Loring Oil Co.'s No. 1 Martinez, 330 ft. N and W SE cor. NW NE, Sec. 3-7-13	Rigging up.
H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E, 150 ft. N, SW cor. NW SE, Sec. 15-7-11	Derrick.
Frank Melat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11	Rigging up.
Ben Merritt, trustee's No. 1-B Nulton, 570 ft. N, 250 ft. W, SE cor. SW NE, Sec. 3-7-13	Set 10-in. 102 ft.
C. D. Neff, tr.'s No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11	Derrick.
Pelican Natural Gas Co.'s No. 14 La. Long Leaf Lbr. Co., 330 ft. S and E, NW cor. NW NE, Sec. 8-7-11	W.O.S.R. 2,404 ft.
Pelican Nat. Gas Co.'s No. 15 Louisiana Long Leaf Lbr. Co., 330 ft. N and W, SE cor. SE SW, Sec. 5-7-11	Derrick.
T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12	Derrick.
F. G. Reid's No. 1-B McNeely, 400 ft. S, 110 ft. W, NE cor. NE NW, Sec. 14-7-11	W.O.S.R. 2,508 ft.
F. G. Reid's No. 4-A McNeely, 200 ft. S and W, NE cor. NW NE, Sec. 14-7-11	Rigging up.
Howard Russell's No. 1 Porter, 680 ft. N, 230 ft. W, SE cor., Sec. 7-7-11	Set 6-in. 2,352 ft.
Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW	S.D.; W.O. 2,699 ft.
Sabine Prod. Co.'s No. 2 Sabine Lbr. Co., 330 ft. S and E from center of Sec. 3-7-13	Derrick.
Self & Kissick's No. 2 Moran, C W½ SE NE, Sec. 1-7-11	Derrick.
Service Drlg. Co.'s No. 3-A Gardner, 138 ft. S, 134 ft. W, NE cor., Sec. 12-7-11	Derrick.
Ben F. Smith's No. 1 fee, 330 ft. S, 400 ft. E, NW cor. Sec. 4-7-11	Flowing est. 4,000,000 ft. gas; spray salt water 2,301 ft.
W. S. Smith, trustee's No. 1 Hamilton, 330 ft. N and E, SW cor. NE NE, Sec. 32-8-11	Derrick.
F. E. Stancil's No. 1 Pouder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11	Tested dry 2,593 ft.
F. E. Stancil's No. 2 Pouder, 805 ft. N, 283 ft. E, SW cor. SE SE, Sec. 10-7-11	Location.
State Prod. Co.'s No. 1 Keazele, 150 ft. N and W, SE cor. NW SW, Sec. 2-7-13	Derrick pattern.
The Texas Company's No. 2 Nabours, 576 ft. W, 237 ft. S NE cor. SE, Sec. 2-7-11	Rigging up.
E. M. Thompson's No. 1 Travis, 350 ft. N and E, SW cor. SE SW, Sec. 12-7-11	Set 4½-in. 2,457 ft.
A. A. Trammell's No. 1 Hill, 330 ft. S and W, NE cor. SE SE, Sec. 32-8-11	Rigging up.
J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13	Location.

UNION PARISH

Southern Carbon Co.'s No. 60 fee, 36 ft. W, 482 ft. S, NE cor. NW, Sec. 20-20-4e	Rigging up.

ARKANSAS

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13	T.A. 3,586 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13	Location.
Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW	T.A. 3,545 ft.
Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE	S.D. 1,730 ft.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur.	S.D. 3,359 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur.	Location.

MISSISSIPPI

HINDS COUNTY

Joe A. Baker et al's No. 1 Hudson, 380 ft. W, 700 ft. S. NE cor. NW NE, Sec. 11-5n-1e	Drlg. 1,050 ft.
Henslee et al's No. 1 Warner, 200 ft. S and E NW cor. NE SE, Sec. 14-5n-1e	Drlg. 1,930 ft.
Cleve Nooe et al's No. 1 Security Realty Co., 700 ft. E, 300 ft. S, NW cor. NE NW, Sec. 1-5n-1e	Drlg. 150 ft.
McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 250 ft. N, 450 ft. W, from center of Sec.	T.A. 2,487 ft.

RANKIN COUNTY

Meredith-Smith et al's No. 3 Strawder, 400 ft. S, 750 ft. W, NE cor., Sec. 12-5n-1e	Drlg. 750 ft.

Wildcat Operations in Mississippi

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e	S.D. 104 ft.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE	Set 5½-in. 2,485 ft.
Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec.	Drlg. 3,150 ft.

LAMAR COUNTY

Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 18-2n-14w	Drlg. 1,840 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	Drlg. red shale 1,900 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w	Drlg. 950 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-4n-11e	S.D. 1,520 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e	S.D. 1,735 ft.

RANKIN COUNTY

James Alexander, tr.'s No. 1 Holmas, 445 ft. E, 375 ft. N, SW cor. NW, Sec. 31-6n-2e	Rigging up.
Ferguson Fuller et al's No. 1 Ivey, 120 ft. W and S NE cor. NW, Sec. 13-5n-1e	Drlg. 920 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e	Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	S.D. 750 ft.

WARREN COUNTY

Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2	Abnd. 2,607 ft.

Wildcat Operations in Alabama

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
Tidal Oil Co. et al's No. 1 Hobson, Sec. 33-6n-2e	Dry and abandoned 4,533 ft.

LAMAR COUNTY

(Cable tools)

DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 22-15s-16w	Arranging to set 6⅝-in. 2,617 ft.

MOBILE COUNTY

Ohio Oil Co.'s No. 1 James Bethel, 330 ft. N and E, 3,300 ft. E of NW cor. SW SE, Sec. 34-3s-2w	Set 13⅜-in. 775 ft.
J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w	Drlg. 967 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w	Rigging up.

MARKET RECORD OF OIL SECURITIES

Important acquisitions and expansions by the Pure Oil Co. are disclosed in its application to list its new class of stock of $10 per share in place of an equal number of old $25 par shares. The application reveals organization of a new subsidiary, Pure-Inland Transportation Co., to operate on the inland waterways of Alabama and the expansion of its river marketing operations on the Ohio and Kanawha Rivers, as well as wider marketing affiliations in other sections.

Shell T. & T.

Shell Transport & Trading Co., Ltd., has paid to Chase National Bank for distribution to American shareholders a dividend of 1s.6d. per share, equivalent to 53 cents per share on each American share. The dividend is payable July 22 to stockholders of record July 15. This dividend compares with a disbursement of 72.6 cents per American share a year ago.

Houston Oil

Houston Oil Co. of Texas and Houston Pipe Line Co., its wholly owned subsidiary, report for the first quarter of 1932 consolidated net income of $20,146, after interest, depreciation, depletion, abandoned leases, federal taxes and other charges. This is equal to 5 cents a share on the 357,904 shares of preferred and compares with $238,703 in the first quarter last year.

Tide Water

Tide Water Oil Co. has declared the regular quarterly dividend of $1.25 per share on the 5 per cent preferred stock, payable August 15 to stock of record August 1.

Colonial Beacon Oil

Colonial Beacon Oil Co. (controlled by Standard Oil of New Jersey), reports for the March quarter net loss of $865,902 compared with net loss of $1,005,011 in the first quarter of 1931.

Venezuelan Oil

Venezuelan Oil Concessions, Ltd., has declared a dividend of 10 per cent, less tax, on the ordinary shares for 1932 and a similar dividend on the company's preferred stock.

Cumberland Pipe

Cumberland Pipe Line Co. has declared the second liquidating dividend of $2.50 a share on the common stock.

Simms Petroleum

Simms Petroleum Co. and subsidiaries report for the March quarter net loss of $226,899, after interest, taxes, drilling costs, depreciation and depletion, compared with net loss of $396,376 in the first quarter last year.

Panhandle

Panhandle Producing & Refining Co. and subsidiaries report for the March quarter this year net loss of $148,175, after taxes, depreciation, depletion, amortization, intangible development costs and other charges, as compared with loss of $126,557 in the comparable quarter of 1931.

Amerada

Amerada Corp. reports for the March quarter net income of $225,383 after taxes and charges. This was equal to 25 cents a share, and compares with $58,235 or 6 cents a share in the first quarter of 1931.

General Asphalt

General Asphalt Co. reports for the year ended March 31 net loss of $7,174 after taxes and charges, compared with net profit of $844,567 in the previous 12 months.

Derby Oil

Derby Oil & Refining Co. reports for the March quarter net loss of $27,828 after charges, as compared with net profit of $1,808 after charges in the first quarter last year.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb based on closing quotations for Wednesday, was as follows:

Dec. 30	12.31	Apr. 6	12.12
Jan. 6	12.69	Apr. 13	11.31
Jan. 13	13.63	Apr. 20	12.11
Jan. 20	13.14	Apr. 27	12.46
Jan. 27	12.79	May 4	11.71
Feb. 3	13.19	May 11	12.23
Feb. 10	12.02	May 18	12.57
Feb. 17	13.28	May 25	12.44
Feb. 24	13.45	June 1	11.34
Mar. 2	13.61	June 5	11.39
Mar. 9	14.38	June 15	11.86
Mar. 16	13.00	June 22	11.41
Mar. 23	13.02	June 29	12.09
Mar. 30	13.85	July 6	11.75

Root Refining

Root Refining Co. reports for 1931 net loss of $98,146, after expenses and other charges. This compares with net loss of $340,370 in 1930.

Warner-Quinlan

Warner-Quinlan Co. reports for the March quarter net loss of $414,120, including profit of $56,310 from discount on bonds redeemed. This compares with net loss of $20,916 in the first quarter last year, including profit of $128,312

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended July 2)

1932 High	1932 Low	Week ended July 2 Sales	Week ended July 2 High	Week ended July 2 Low	Close July 6	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
⅜	¼	400	¼	¼	..	American Maracaibo	(sh)	700,000	N.P.	....	.....	8⅝	1⅛	4½	½	1¾	¼
2¾	⅝	100	⅞	⅞	..	Arkansas Natural Gas	(sh)	4,084,225	N.P.	....	.....	26	3¾	16¾	4⅝	6½	1⅜
2⅝	½	1,100	⅝	⅝	¾	Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	24¾	6½	16⅝	4⅝	6¾	1⅜
5½	2	300	2⅛	2	..	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	9	4	8½	6¼	7	3⅜
9¾	7	No sales	..	..	..	British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	7- 2-32	62	7⅞	23	13⅜	16⅞	6¼
⅝	¼	100	¼	¼	..	Carib Syndicate		$131,250	25c	....	.....	4⅞	1	2¾	⅝	2⅝	⅛
6⅞	1½	26,500	2⅛	2	2	Cities Service	(sh)	36,418,721	N.P.	30cA§	6- 1-32	68½	20	44¼	13	20¾	5
53¾	10	700	14	12½	..	Cities Service pfd.	(sh)	1,125,931	N.P.	50cM	6- 1-31	98¾	84	93⅞	78¼	84¾	35⅝
⅛	1/16	No sales	..	..	..	Colombia Syndicate		3,250,000	N.P.	....	.....	..	..	21	3⅜	7⅛	1
1⅞	½	600	⅝	½	..	Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	2	½	¾	⅛	½	1/16
⅝	¼	100	¼	¼	..	Colon Oil	(sh)	2,200,000	N.P.	....	.....	15	3⅞	8¼	1⅛	3½	¼
1⅜	1	No sales	..	..	..	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	4-25-32	11⅛	2½	5⅞	2	2¾	1
1	¼	200	½	½	..	Cosden Oil	(sh)	323,950	N.P.	....	.....	135	42	74¾	1¼	3¾	⅜
2½	1⅝	100	2	2	..	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	26	6½	21¾	4¼	5	1⅜
2⅛	1	500	1½	1	..	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	11	2	11	2	6	1½
24½	10½	No sales	..	..	..	Derby Oil & Refining pfd.		48,500	N.P.	....	.....	44	20¾	60	30	40¼	25
35⅞	23	3,800	27	24	27	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	209	115	166⅞	58½	75½	25⅜
4½	2¾	No sales	..	..	..	Indian Terr. Illum. Oil "B"	(sh)	7,090,037	N.P.	....	.....	..	..	53½	12⅝	16⅞	5
¼	1/16	200	1/16	1/16	..	Intercontinental Petroleum		$5,682,000	$5	....	.....	2⅞	⅜	1¾	⅜	⅝	⅛
⅝	⅜	100	⅜	⅜	..	Kirby Petroleum	(sh)	750,000	N.P.	....	.....	3⅝	1¼	3	⅞	1⅞	¼
½	⅛	No sales	..	..	..	Leonard Oil & Development		$50,000,000	$25	....	.....	14⅜	2½	5	¾	2	½
⅞	½	No sales	..	..	..	La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	6¼	1	4¾	½	1½	¼
2⅜	⅞	No sales	..	..	..	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	38⅞	18	29	4⅞	6¾	1½
9¼	3⅝	300	3⅝	3⅝	3⅝	Lone Star Gas	(sh)	5,000,000	N.P.	16cQ‡	6-30-32	67⅞	28	55⅞	19⅝	25	5½
⅛	1/16	100	1/16	1/16	..	Magdalena Syndicate	(sh)	850,000	$1	....	.....	1¼	½	½	⅛	½	¼
6⅛	3⅝	No sales	..	..	..	Margay Oil Corp.		160,000	N.P.	25cQ	4-11-32	38½	14	16	3	5	1⅞
5¼	1⅝	500	2	1⅝	..	Memphis Natural Gas	(sh)	920,000	N.P.	15cQ	4-15-32	24	8⅛	22¼	7½	12⅛	4½
2	1½	No sales	..	..	..	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	6⅜	2¼	7½	1¾	4⅞	1½
⅛	⅛	No sales	..	..	..	Mountain & Gulf		$4,000,000	$1	....	4-15-31	1½	½	¾	⅜	½	⅛
3¼	2⅛	1,200	3⅛	3	..	Mountain Producers		$1,682,182	$10	20cQ	4- 1-32	22⅞	7	12⅛	3¾	5⅞	2
13½	8	700	10¼	9⅞	..	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	4-15-32	43⅞	23	41⅜	19⅜	26½	9¾
¾	⅜	100	⅝	⅝	⅝	New Bradford Oil		$7,224,186	$5	....	4-15-31	5	2½	3½	1⅛	1½	½
⅞	⅜	700	⅜	⅜	..	New Mexico and Arizona		$1,000,000	$1	....	.....	9⅜	2¼	7¼	1½	3	¾
1	⅝	No sales	..	..	..	North Central Texas	(sh)	262,446	$5	....	9- 2-30	18½	6⅛	11¼	2½	3¼	⅝
⅜	1/16	500	⅛	⅛	..	North European Oil	(sh)	1,372,391	N.P.	....	.....	..	..	6¼	⅜	2⅛	¼
6¼	3	200	3	3	..	Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	26⅝	12⅛	19½	5½	15	2⅞
⅛	1/16	No sales	..	..	..	Pandem	(sh)	1,291,403	N.P.	....	.....	3½	½	2½	¼	½	1/16
½	1/16	100	¼	¼	⅛	Pantapec Oil	(sh)	1,595,500	N.P.	....	.....	10½	1⅞	4⅜	⅞	2	⅜
7¾	6	200	6	6	..	Plymouth Oil	(sh)	1,050,000	$5	25cQ	7- 1-32	37	22	27½	16¼	19	6
½	1/16	No sales	..	..	..	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	8½	1⅛	5⅝	1	3⅛	¼
1	¼	100	¼	¼	..	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	31½	22	23½	6½	11	¼
1¼	⅝	100	⅝	⅝	..	Ryan Consolidated	(sh)	296,931	N.P.	....	.....	11	2	8⅝	2	3	⅝
½	⅛	No sales	..	..	..	Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	5⅞	1⅞	2½	½	1⅝	⅛
4⅛	2⅞	1,000	3⅞	3⅝	3¾	Salt Creek Producers	(sh)	1,496,859	$10	25c	5- 2-32	25⅞	9	15¼	5¼	7¾	2⅜
½	¼	2,600	¼	¼	..	Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	12	5⅝	10	2	5¼	¼
6⅝	4½	300	5⅛	4⅞	..	Texon Oil & Land	(sh)	936,036	N.P.	25c	6-30-32	23	7⅛	19½	8	12⅞	2½
½	⅛	No sales	..	..	..	Venezuelan Petroleum	(sh)	755,000	$5	....	2-15-30	6½	1¾	4½	⅜	1⅞	¼
2	1½	No sales	..	..	..	Woodley Petroleum		$500,000	$1	....	3-31-29	9½	2	5	½	3½	1⅛
⅝	⅛	100	½	½	..	Y Oil & Gas		100,000	N.P.	....	.....	2⅞	½	2½	⅝	2¼	¼

*Ex-dividend. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

from the sale of undeveloped oil leases and discount on bonds redeemed.

Middle States

Middle States Petroleum Corp. reports for 1931 consolidated net loss from operations of $495,513, compared with consolidated net earnings of $131,212 for 1930. Deductions for depreciation, depletion, amortization, etc., for 1931 totaled $610,693, against $445,039 in the previous year.

Arkansas Natural Gas

Arkansas Natural Gas Co. reports for 1931 net profit of $1,663,451, equal after the 6 per cent preferred dividends to 4 cents per share on combined 4,084,225 shares of common and 3,522,521 no-par shares of Class "A" common.

NEW BRADFORD TRANSIT LINE

BOLIVAR, N. Y., July 11.—Withdrawal of the Vacuum Oil Co. as a buyer of Allegany crude has resulted in the Bradford Transit Co. planning to lay 4 miles of 3-inch pipe from the company's Obi station to Myrtle station. The crude from this area had been delivered to the Vacuum company plant in Olean through Vacuum's line.

Standard Oil Stocks on New York Curb

Quotation Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended July 2)

1932 High	1932 Low	Week ended July 2 Sales	Week ended July 2 High	Week ended July 2 Low	Close July 6	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
6¼	6	No sales	..	..	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	46½	25	25	11¼	16	6
35	18	500	18	18	..	Buckeye Pipe Line		$10,000,000	$50	$1Q	6-15-32	74½	55	69	39⅞	56	30
90	53	100	60½	60½	..	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	6-30-32	210	130	184⅞	104¼	129½	75
2½	1¾	11,200	2⅛	2⅛	2⅛	Creole Petroleum	(sh)	5,977,872	N.P.	....	.....	11¾	5⅜	7⅞	3	3⅞	1⅝
35	18	50	22	22	..	Eureka Pipe Line		$5,000,000	$100	$1Q	8- 1-32	70½	40	54¾	26	36	19
49	35⅝	1,000	37⅝	37	38	Humble Oil & Refining		$74,103,300	$25	50cQ	7- 1-32	128	74⅛	119	57¼	72	44¼
9½	6¼	800	7⅛	6⅝	7	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	3- 1-32	41	22	30	15	18¼	7⅝
7½	2⅞	200	3	3	..	Indiana Pipe Line		$3,000,000	$10	25cQ	2-15-32	41⅞	26	41	14½	21⅛	5½
10⅝	8	1,500	8⅞	8½	8¾	International Petroleum	(sh)	14,247,088	N.P.	25cQ	3-15-32	30⅜	15	24	11⅜	15½	7⅜
10½	6	500	6¼	6	..	National Transit		$6,362,500	$12.50	25cQ	6-15-32	25⅛	10⅛	22⅜	11½	17½	5
4	2¼	400	2¾	2¼	..	New York Transit		$500,000	$5	10cQ	4-15-32	17½	10	21⅜	10⅛	14½	5⅞
4¾	3⅛	300	3½	3½	..	Northern Pipe Line		$1,200,000	$10	25c	1- 2-32	63	41	54	26¼	35½	20
6⅜	4	No sales	..	..	..	Penn Mex Fuel		$10,000,000	$25	50c	5-25-32	44½	20	32	12	15½	5½
14½	9⅝	400	12½	12⅜	..	South Penn Oil		$30,000,000	$25	25cQ	6-30-32	60¼	35⅛	45⅞	16⅛	23⅞	9¼
10	5⅛	No sales	..	..	..	Southern Pipe Line		$1,000,000	$10	35cQ	6- 1-32	22½	13	20⅞	8⅜	17	7
37	27	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	7- 1-32	70	60	64	32	42½	25
19¼	13⅛	28,200	18¼	17½	18¾	Standard Oil of Indiana		$424,914,895	$25	25cQ	6-15-32	63	45	59⅞	30	38½	13⅛
15⅞	8⅞	4,200	9⅝	9	9⅛	Standard Oil of Kentucky		$25,654,516	$10	30cQ	6-30-32	46⅞	29	40½	18⅝	23⅝	12⅛
19	10½	700	10½	10½	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	6-21-32	50¼	40	48⅞	34⅝	36½	16
28⅛	15½	1,400	20	19½	..	Standard Oil of Ohio		$18,811,675	$25	62½cQ	4- 1-32	129	60	108½	43¼	62½	23
2	1⅝	No sales	..	..	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	18	10	10	4	4½	1

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended July 2)

1932 High	1932 Low	Week ended July 2 Sales	Week ended July 2 High	Week ended July 2 Low	Close July 6	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
16⅝	12	1,500	14¾	14⅛	14¾	Amerada Corp.	(sh)	922,075	P.N.	50cQ	1-30-32	42⅝	17½	31½	16½	23	11¼
4	¼	No sales.	..	..	..	American Republics Corp.	(sh)	209,180	N.P.	....	12-31-30	64¾	12½	37	5½	12⅜	1¼
9¾	6¾	No sales	..	..	..	Associated Oil		$57,260,300	$25	25cQ	4-15-32	47¼	34½	51	30	31	8¾
12⅞	8⅝	3,800	11	10⅛	11	Atlantic Refining		$67,416,050	$25	25cQ	3-15-32	77⅞	30	51⅜	16⅝	23⅝	8⅝
5⅞	3⅜	2,000	4¼	4	4¼	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	49⅛	20	34	8⅝	14½	4
16⅛	4¼	9,300	6⅝	5⅞	6⅝	Columbia Gas & El.	(sh)	11,684,220	N.P.	25cQ	5-15-32	140	52	87	30⅝	45⅝	11⅝
11	9	100	10	10	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	32⅞	12½	20⅜	8⅝	10½	7½
7⅛	4	20,500	5	4⅝	5⅜	Consolidated Oil Corp.	(sh)	14,190,000	N.P.	....	.....	..	..	..	..	..	..
7	3⅝	5,700	4¼	4	4⅜	Continental Oil of Delaware	(sh)	4,741,554	N.P.	....	12-15-27	47⅞	18	30½	7¾	12	5
35¾	9½	5,400	10⅞	9½	11	General American Tank Car	(sh)	751,638	N.P.	$1Q	1- 1-32	123¾	75	111⅞	53⅛	73⅛	28
15½	4¾	400	6	6	..	General Asphalt	(sh)	413,333	N.P.	25cQ	6-15-32	94¾	42¼	71½	22⅝	47	9⅝
24⅜	8¾	1,200	10¼	9¼	10¼	Houston Oil		$24,968,600	$100	....	10-17-30	109	26	116⅞	29¼	68½	15¾
1⅝	1	500	1	1	..	Indian Refining		$12,564,070	$10	....	10- 1-30	53	13⅛	17	2	4⅝	1⅛
1⅝	½	200	½	½	..	Louisiana Oil Refining	(sh)	1,190,063	N.P.	....	.....	18	7	12	3½	4½	1
1	⅜	100	⅜	⅜	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	18½	5⅛	10⅜	1⅜	3⅜	½
6½	3¾	1,500	4⅜	4⅛	4½	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	39⅞	22⅛	32	11	16¾	5
9¼	3½	100	5	5	..	National Supply of Delaware	(sh)	390,879	$50	....	5-15-31	144	98½	124¾	60	70¼	5
8½	5	3,500	7⅛	6⅝	7⅛	Ohio Oil	(sh)	6,648,052	N.P.	20cQ	6-15-32	79⅞	64¼	32	16	19½	5⅛
7⅞	7⅛	No sales	..	..	..	Pan American P. & T.	(sh)	1,000,000	$5	25cQ	6-30-32	69	40½	46½	42	35⅛	20
8¼	7⅞	No sales	..	..	..	Pan American P. & T. "B"	(sh)	2,474,288	$5	25cQ	6-30-32	69¼	40½	67¼	30	36½	18
1¼	½	No sales	..	..	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	15¼	3	12¾	1¾	4¼	⅝
6½	2	4,300	3½	3	3⅝	Phillips Petroleum	(sh)	2,593,075	N.P.	....	•1- 2-31	47	24¼	44⅝	11½	16⅝	4
½	¼	700	¼	¼	..	Pierce Oil Corp.		$29,622,831	$25	....	.....	3⅜	1	2½	½	1½	¼
1⅛	½	400	⅝	½	⅝	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	5⅞	½	7⅛	1⅛	3⅜	½
7⅛	3½	No sales	..	..	..	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	65⅜	40½	54	11¼	20⅜	4½
9¾	5½	1,000	7	7	7⅛	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	65	45	60	16⅝	28½	5⅞
1⅝	⅛	No sales	..	..	..	Producers & Refiners		$37,438,950	$50	....	9-15-23	25⅞	4	11⅞	1	6	1
9¾	1	No sales	..	..	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	46¾	25½	40	11½	16	3
5⅛	2⅞	1,600	3⅜	3	3½	Pure Oil		$75,959,250	$25	....	9- 1-30	30¾	20	27¼	7⅝	11⅞	3¼
¾	¼	500	⅜	⅜	⅜	Richfield Oil (new)		$52,410,875	N.P.	....	.....	49⅝	20	9¾	4⅛	6⅝	⅝
2½	1⅜	1,500	2¼	2	2¼	Rio Grande Oil	(sh)	1,236,270	N.P.	....	7-25-30	42½	15	25⅜	5	10¼	1¼
23	12⅛	1,500	16¼	15¾	18⅝	Royal Dutch N. Y.	(sh)	611,303	....	81c†	.....	64	43⅛	56½	36⅞	42⅝	13
9⅞	6⅝	3,400	7¾	7⅛	7⅝	Seaboard Oil of Delaware	(sh)	1,244,383	$4	10cQ	6-15-32	59⅜	8¼	37	9¾	20¾	5½
15¾	8	146	12	11⅞	..	Shell Transport & Trading Co.		£23,985,000	£1	55c†	.....	51½	40⅝	48⅜	26	34	5
4⅛	2½	3,400	3	2⅝	3½	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	31⅜	19	25½	5¼	10¼	2½
31	18	900	20⅛	20	25	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	108¼	93	106¼	55	78	15
6	3¼	600	3⅞	3¾	4⅛	Simms Petroleum	(sh)	600,000	$20	....	9-15-30	40⅛	15	37	5⅝	11	3½
4½	2½	300	3⅛	3	..	Skelly Oil		$27,441,250	$25	....	12-15-30	40½	28	12	10⅛	12⅞	2
19	12	No sales	..	..	..	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	..	..	99¾	42	62	10
10¾	5¼	15,100	7⅛	6⅞	6⅞	Socony-Vacuum		$793,613,588	$25	20cQ	6-15-32	..	..	106⅜	98	106	87⅛
91½	81	300	85	84½	..	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	6-30-32	..	..	..	..	21	8⅝
27¼	15⅛	7,800	18⅝	17¾	18⅝	Standard Oil of California	(sh)	13,102,900	N.P.	50cQ	6-15-32	81⅞	51½	75	42½	51¾	23⅛
12¾	7	2,100	7½	7	7	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	33¾	18	49	14⅜	19	7¾
31½	19⅞	49,100	24¾	23¼	25	Standard Oil of New Jersey		$637,961,700	$25	25cQ‡	6-15-32	83	49	84⅞	32½	52½	26
32	24¾	100	27¼	27¼	26	Sun Oil	(sh)	1,416,869	N.P.	25cQ	6-15-32	68⅜	55	70	39	45¼	26¾
⅝	¼	500	⅜	⅜	⅜	Superior Oil Corp.	(sh)	766,979	N.P.	....	12-20-30	24	5¼	9⅜	⅜	1⅜	¼
13⅞	9½	13,100	9¾	9¼	10	The Texas Corporation		$246,204,900	$25	25cQ	7- 1-32	71⅞	50	60½	28¼	36¼	9⅞
2⅜	1½	700	1⅞	1¾	..	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	23⅞	9½	14½	4	6½	1⅞
9	5	No sales	..	..	..	Tide Water Oil	(sh)	2,191,759	N.P.	25cQ	6-30-32	40	14	31	13	18	9⅞
41	30	No sales	..	..	..	Tide Water Oil pfd.	(sh)	190,446	N.P.	$1.25Q	2-15-32	97½	85⅛	94⅞	71	83	30
3½	2	2,900	2¼	2⅛	2⅜	Tide Water Associated	(sh)	5,560,424	N.P.	....	2-16-31	23½	10	17¾	5⅞	9	2⅛
30⅜	20	1,000	28⅛	25¾	..	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	7- 1-32	90⅞	74⅛	89¾	55	68	20½
13⅞	8⅛	3,800	9¾	9	9	Union Oil of California		$104,342,375	$25	35cQ	2-10-32	57	42½	50	10⅛	26⅝	11
19¼	11¾	2,000	12⅛	11¾	..	Union Tank Car	(sh)	1,254,048	N.P.	35cQ	6- 1-32	163¾	121⅞	38½	23	25⅛	16
1½	½	1,100	½	½	..	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	42⅞	15	27	4¼	7⅜	⅞
5¾	2¾	8,000	4¾	3⅞	4	Wilcox Oil & Gas	(sh)	428,967	$5	...	5-10-28	29¾	12⅞	21	6½	9⅜	2¾

*Ex-dividend. †Final dividend for 1931. ‡Plus extra dividend of 25 cents.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

REFORMING GASOLINE FOR IMPROVING KNOCK RATING

Can you give me a description of the reforming operation for cracking gas, gasoline and light oils to make new substances, and especially to improve knock rating of gasoline? How much increase in antiknock rating of straightrun gasoline is obtained by this process?—A. J. R.

Much progress has been made during the past five years in improving the quality of gasoline intended for motor fuel. A fuel practically free from corrosive compounds and objectionable residues, with excellent volatility, is quite generally obtainable. The most satisfactory performance of the engine is obtained with a gasoline which does not knock. so much emphasis is now placed on the knock rating of the gasoline. The consumer demands that the fuel shall function without the annoying and destructive knock. Many crude oils yield a gasoline of low knock rating, when the product is obtained by primary distillation, and to improve this condition the refiner has extended the cracking operation, and made suitable adjustments in the units, to include pressure and heat treatment of the crude gasoline for the purpose of rearranging the molecular structure to form compounds of higher knock value. A similar operation has been applied to natural gas and the most volatile hydrocarbons for the manufacture of other compounds.

The cracking of crude gasoline, or heavy naphtha, was described by E. B. McConnell in The Oil and Gas Journal April 30, 1931, page 16. The material following is from this article.

The equipment for cracking the crude gasoline was a Tube and Tank unit operating at 1,000 pounds per square inch in the reaction chamber. The parts included a furnace, vertical reaction chamber and two conventional 10-plate bubble towers in series. Fresh charge passes through suitable heat exchangers to an accumulator where it mixes with hot cycle stock from the bubble towers. The separator, towers and accumulator are held at 100 pounds. Hot feed pumps take suction on the accumulator and discharge through intercondensers (located in the vapor line between the tar separator and primary tower) to the furnace. There was a possibility that the accumulator temperature would run so high that the light ends of the naphtha would be vaporized, but as a matter of fact, the per cent fresh in the total feed was so high that the accumulator temperature ran sufficiently low to prevent this from occurring. The operating conditions were as follows:

Temperatures—Accumulator, 370° F.; coil inlet, 575° F.; coil outlet, 925° F.; top reaction chamber, 890° F.

Pressures—Reaction chamber, 1,000 pounds; bubble towers, 100 pounds.

Running rates—Total feed to coil, 11,700 g.p.h.; fresh feed to accumulator, 5,800 g.p.h.; distillate produced, 4,750 g.p.h.

The charging stock, 51° A.P.I. gravity, showed a knock rating of 55 octane number and the distillate, representing a yield of 82 per cent, 53.5° A.P.I. gravity, tested 70 octane number. Natural gasoline was added to each to bring the volatility up to 27 per cent recovered at 212° F. The final properties are indicated in the table.

	Heavy naphtha plus 31.8% casinghead	Distillate plus 13.8% casinghead
I.B.P.	94	96
Per cent 212	27	27
Per cent 284	43	54
F.B.P.	432	400
Octane number	55	71

Not only does the heavy naphtha blend have a very low knock rating, but it is also low at the 284 point. It obviously is not marketable as a high quality fuel. On the other hand, the distillate blend is satisfactory in every respect.

The reforming of hydrocarbons, gases and the more volatile liquids was discussed by Oberfell and Guyer in The Oil and Gas Journal June 9, 1932, page 62. In this article the equipment required for the cracking of hydrocarbon vapors to form motor benzol was listed as a tube furnace, reaction chamber, and a benzol light oil recovery system.

The hydrocarbon vapors to be cracked are heated to 1,300° to 1,400° F. in the tubes. During this heating period endothermic reactions take place which result in the formation of the maximum concentration of unsaturated hydrocarbon gases. The hot gases from the coils enter the insulated reaction chamber where the exothermic reactions take place, during which the benzol light oils are formed.

The gas resulting from the pyrolysis of hydrocarbon vapors and gases to produce motor fuel is in certain respects more useful to the gas industry than are the original hydrocarbon vapors. By means of a slight sacrifice in benzol light oil yield, a rather wide range in quantity and quality of the gas can be obtained. Gases ranging from approximately 0.45 to 0.75 specific gravity and from about 875 to 1,300 B.t.u. have been produced in commercial size plant operation. Operating conditions can, therefore, be adjusted to take full advantage of the relative economics of the two concomitant products.

GRADES OF FUEL OIL

I have just started selling fuel oil and would like to know more about the product. Any information on the subject, that is not too technical, would be appreciated. —S. A. G.

The American Society for Testing Materials has defined fuel oil, Report of Committee D-2 on Petroleum Products and Lubricants, 1931, page 258, as follows:

"Fuel Oil—Any liquid or liquefiable petroleum product burned for the generation of heat in an industrial or household furnace or firebox, or for the generation of power in a Diesel engine, exclusive of oils with a flashpoint below 100° F., Tag closed tester, and oils burned in cotton or wool wick burners. Fuel oils in common use fall into one of four classes: (1) residual fuel oils, which are topped crude petroleums or viscous residuums obtained in refinery operations; (2) distillate fuel oils, which are distillates derived directly or indirectly from crude petroleum; (3) crude petroleums and weathered crude petroleums of relatively low commercial value; (4) blended fuels, which are mixtures of two or more of the three preceding classes."

The United States Government Federal Specifications Board, Technical Paper 323-B, Bureau of Mines, mentions four grades under "Specifications for Fuel Oils," page 5-7. These are: Fuel oil, navy standard; bunker fuel oil A, B and C. These are purchased under specifications for flashpoint, viscosity, sulphur, water and sediment. The minimum flash permitted is 150° F.

These quality stipulations indicate what characteristics must be considered when grading fuel oils. The Oil and Gas Journal shows under Refinery and Crude Prices, the market price of 15 or more fuel oils and these are mainly classified on the basis of A.P.I. gravity, but occasionally additional specifications are mentioned, such as cold test and color. Very little fuel oil is purchased for industrial use simply on a gravity specification. water and sediment is usually specified for these oils at a maximum of 1 per cent, although some oil containing 2 per cent is accepted, and the flowing condition is governed by a specification either for pourpoint, viscosity, or must flow through a pipe of specified size and a fixed temperature. The flashpoint should be relatively high, unless the oil is to be burned in some special apparatus under safe conditions, to keep within the insurance regulations. Domestic fuel oils should be free from sediment and must flow at low temperatures.

It should be noted that petroleum fuel oil is usually a by-product obtained in the manufacture of light oils and lubricants and is not refined oil; so the characteristics are incidental to the methods used for obtaining the refined products. There may be substances present in a fuel oil that would render the oil unfit to be handled in some oil burning systems but would be found satisfactory if burned in others. It is therefore not only sufficient to know all of the properties of a fuel oil but it is essential to also be informed concerning the conditions under which the oil is to be used.

COKE AND CARBON DEPOSITS

Have observed a heavy coke deposits in and around the top release valve of reaction chamber or soaking drum operating at 910° F. and 1,000 pounds pressure charging heavy naphtha with very little coke in the soaker.

Coke formation has been attributed to the decomposition at high temperature of very high molecular weight compounds resulting from protracted cracking by polymerization of unsaturated hydrocarbons produced in the primary decomposition. The primary decomposition or initial cracking reaction results in the formation of low molecular weight hydrocarbons of the paraffin and olefine series and carbon. Time is a very important factor in the polymerization reaction.

What is your opinion on the following covering the restricted formation of coke in and around top release valve of a reaction chamber operated as specified?

The rapid formation of coke in and around top release valve on soaking drums is formed by the aggregation of colloidal particles of carbon and similar matter, by the centrifugal action of turbulent flow, those colloidal particles will be accumulated to a larger size deposit on the sides of walls in solids known as coke and this limits runs of cracking coils to a considerable degree in charging heavy naphtha.—G. J. L.

The literature gives so little proof of the exact changes that take place within the several hydrocarbon molecules under cracking conditions that explanations of the reactions are largely of a speculative character and based on numerous assumptions. However, it is generally admitted that polymerization processes accompany the splitting. The quantity of gum contained in the distillate from the cracking still is a common problem which the refiner must solve. This gum, being present in the lighter vapors, is quickly deposited and decomposes, with the result that large quantities of carbon may be found in towers, at release valves and at other places where the conditions for the deposition of the gummy liquid and decomposition, through prolonged heating, are favorable.

The quotation following, from Gurwitsch-Moore, Petroleum Technology, page 252, may be of interest:

The polymerization of the unsaturated fragments resulting from decomposition by heat to form compounds of high molecular weight is very well illustrated by the following researches by Engler and Halmai: 1,850 c.c. of a Russian cylinder oil of specific gravity 0.929 was heated in an autoclave to 420° C., to 430° C., for 10 hours, the gaseous pressure rising to 120 to 128 atmospheres. After liberating the gases twice there remained 1,830 c.cm. of oil of specific gravity 0.858. Of this oil 540 c.cm. with a specific gravity of 0.755 distilled over up to 180°, and the residue had a considerably higher specific gravity than the original oil, namely, 0.942. On heating this oil again under pressure a further quantity of lighter fractions boiling up to 180° was formed, and the residue became solid and similar to asphalt, and partially carbonized. That the ordinary process of steam distillation is accompanied by such polymerizing processes must be concluded from the fact that in the stills, and particularly in those from which the high boiling lubricating oil fractions are distilled, so-called "coke" is always deposited with greater or less rapidity and this coke must be regarded as the product of extensive polymerization.

PERSONAL PARAGRAPHS

R. J. Carson, Southern Natural Gas Company, Granville, Miss., is now at Boulder City, Nev.

* * *

John D. Rockefeller celebrated his 93rd birthday anniversary July 8 at his home, Pocantico Hills, N. Y.

* * *

C. Maynard Boos, geologist with the Empire Gas & Fuel Company, Ness City, Kans., is now at Estes Park, Colo.

* * *

T. C. Skeen, Columbian Steel Tank Company, Kansas City, Mo., is in the East Texas Field in the interest of his company.

* * *

R. Paul Huggins of the Western Gulf Oil Company was recently elected second vice president of the Los Angeles Petroleum Accountants Society.

* * *

E. K. Ahrendt, of the sales department of the Parkersburg Rig & Reel Company, Parkersburg, W. Va., was in Tulsa last week on business for his company.

* * *

C. A. Olson, manager of the cost products division of the National Radiator Corporation, of Johnstown, Pa., is spending two months in the Southwest calling on refineries.

* * *

Howard Felt, secretary of the Warren Petroleum Company, Tulsa, with his family, is spending a month's vacation in Pennsylvania and other eastern points. He will return to Tulsa about July 15.

* * *

J. C. Gordon of Wichita Falls, Tex., has joined the engineering staff of Black, Sivalls and Bryson. His headquarters will be in Fort Worth, Tex. Formerly he was petroleum engineer for the Pure Oil Company.

* * *

John N. Troxell, subsurface geologist with the Oklahoma-Kansas-Kentucky producing division of The Texas Company, and with headquarters in Tulsa, has been transferred to the general offices at Houston, Tex.

* * *

H. C. Miller, senior petroleum engineer of U. S. Bureau of Mines, with headquarters at San Francisco, Calif., has recently returned to the San Francisco office, after an extended trip through the Mid-Continent fields.

* * *

Chester W. Washburne, geologist, of New York, has finished a tour of lectures on normal faulting delivered at Princeton University, University of Cincinnati, Leland Stanford, Jr., University, and the state universities of Louisiana, Texas, California and Oregon. The University of Oregon conferred on him the honorary degree of Doctor of Science.

* * *

D. J. Moran, president of Continental Oil Company, and 17 officials and department heads are making the annual inspection of properties, visiting Amarillo, Oklahoma City, Dallas, Fort Worth and East Texas. Members of the party are W. W. Bruce, executive vice president; B. H. Markham, comptroller; Walter Miller, manufacturing department; E. J. Nicklos, production superintendent; E. S. Karstedt, marketing department; G. F. Smith, treasury department; J. J. Cosgrove, legal department; H. J. Kennedy, marketing; E. H. Skinner, pipe line department; G. C. Clark, geological department; W. H. O'Connor, purchasing department; E. O. Bennett, engineering department; P. H. Kuhns, traffic department; H. B. Simcox and R. E. Collom, production; T. D. Harris, motor transportation department, and Emerson G. Smith of the publications department. George H. McIntyre of Fort Worth, manager of the Texas and New Mexico district, joined the party for the trip through East Texas, the Wichita Falls district, the Panhandle, Permian Basin and New Mexico areas.

L. D. Hilton, representing the Gray Tool Company and Cameron Iron Works Company, Houston, Tex., was in Tulsa last week on business.

* * *

H. D. Nash of Dallas, Tex., sales representative of the Neptune Meter Company, New York, called on trade in Tulsa territory recently.

* * *

C. C. Rae, petroleum engineer for the Skelly Oil Company, Tulsa, has been spending much time recently at the company's deep test near Cunningham, Kans.

* * *

A. R. Wilson, division manager of the producing department of The Texas Company in the Rocky Mountain division, has returned to Denver from a trip to northern Montana and southern Montana.

Men of the Industry

C. H. McDUFF

C. H. McDuff was born in Vivian, La., January 31, 1893, and spent the greater part of his youth in that place, entering the oil industry with the Vivian Oil Company, which was owned by the Dawes Brothers of Chicago. He worked only a short time with this organization, leaving it to take a job with The Texas Company as roustabout. He worked through all departments of drilling and production and became field superintendent in 1919, filling that position until 1923, working mostly in North Louisiana and the South Texas fields.

Resigning from The Texas Company in May, 1923, Mr. McDuff entered the service of the Simms Oil Company at Smackover, Ark., taking charge of its production and drilling operations. On April 1, 1924, he joined the Pure Oil Company as assistant general superintendent of production, and was promoted to general superintendent of production, Texas producing division, on December 1, 1926. He is filling that position at the present time.

Mr. McDuff was educated in the schools of Vivian, La., and received his degree in the college of hard knocks at the bottom of the oil industry. He married Miss Bessie Hull of Mansfield, La., January 10, 1919. They have two children, a daughter of 11 and a son of 5. Mr. McDuff is a Mason, a member of Elkarubah Temple of the Shrine in Shreveport, La., and also a member of the Rivercrest Country Club in Fort Worth, Tex. Golf and hunting are sports which take up much of Mr. McDuff's leisure time.

Aubrey Kell of The Texas Corporation, Chicago, was in Casper, Wyo., several days recently.

* * *

Hal Cochran, president of the Pecos Valley Oil Company, is moving to Fort Stockton, from Los Angeles, Calif.

* * *

M. G. Ensinger, of the Union Wire Rope Company, Kansas City, was a business visitor in Tulsa during the past week.

* * *

Herbert L. Pratt, chairman of Socony Vacuum Corporation, sailed for Europe last week, to attend the world oil conference in Paris.

* * *

Paul Breed, with the Standard Oil Co. of New Jersey in the Venezuelan oil field, is visiting his former home in Corning, N. Y.

* * *

E. R. Smith, representing the Smith Hydrostatic Sand Pump, Long Beach, Calif., is in the East Texas Field conducting tests with the pump.

* * *

W. S. Pattison, of the Arrowhead Iron Works, Kansas City, Mo., was in Tulsa last week in connection with the appointment of the B. W. Vinson Company, Tulsa, as distributors.

* * *

Logan Burrell, chief exploitation engineer for the Shell Oil Company of California, with offices in Los Angeles for several years, has been advanced to the main office of the company in San Francisco.

* * *

Gillette Hill, vice president of the Republic Gas Corporation, Houston, Tex., suffered an attack of bronchial pneumonia while on a visit to Denver, Colo. He has recovered, sufficiently, to return to his home.

* * *

V. L. Martin, formerly chief engineer for the Prairie Oil & Gas Company, and C. C. Cool, assistant engineer for the same company, have opened offices in the Exchange National Bank Building, Tulsa, as consulting engineers.

* * *

Francis John, formerly assistant purchasing agent for the Tide Water Companies, Tulsa, is now district sales manager of the Harrisburg Engineering Company with headquarters in Fort Worth. He was a recent Tulsa visitor.

* * *

W. G. Wailes is now assistant division manager in charge of service station operation of the Missouri division of Phillips Petroleum Company, and S. E. Case is assistant division manager in charge of sales in metropolitan St. Louis.

* * *

Capt. A. Taylor, of the Plains Production Oil Company, Midland, Tex., and formerly in charge of the sled dogs on Commander Richard E. Byrd's first trip to the South Pole, is preparing to take off with the second Antarctic expedition to be made by Commander Byrd. Captain Taylor again will be in charge of the dogs.

* * *

W. E. Lockhart and daughter, Miss Hazel, of Ashland, Ky., have been visiting friends in Denver and Parco, Wyo., and spending some time at their summer camp on the Sweetwater in Wyoming. Mr. Lockhart was formerly with the Producers & Refiners Corporation in Denver. For several years he has been connected with a natural gas company in Kentucky.

* * *

R. B. Kelley has been made assistant to the production superintendent in the Texas producing district of Pure Oil Company. Mr. Kelley was formerly chief petroleum engineer and succeeds Peter Smith, who has been transferred to Odessa, where he will direct production activities of Pure Oil Company in the Permian Basin. Mr. Kelley becomes assistant to B. S. SoRelle, manager of the Texas division at Fort Worth.

NATURAL GAS DEVELOPMENTS

COMMUNITY GAS ASKS INJUNCTION DISSOLVED

AUSTIN, Tex., July 11.—The Community Natural Gas Co., subsidiary of the Lone Star Gas Co., filed a motion Saturday asking that the ninety-eighth district court dissolve an injunction it granted the Railroad Commission June 25, restraining the company from increasing its rates. The injunction fixed the scale as at present in 90 towns and communities of less than 500 population. Judge J. D. Moore set a hearing for July 20.

The company asked that the injunction granted temporarily to the attorney general's department representing the Railroad Commission to forestall any change of rates on July statements, be dissolved at an ex parte hearing.

With its demurrer to insufficiency of law for the injunction, the company filed a statement of facts sworn to by F. L. Chase of Dallas, president, maintaining that its promulgated new rates were "better and fairer rates both to consumer and to the company than the rates existing prior thereto, in that such rates eliminate the extremely low summer bills and give the company a greater revenue during the summer months and during a time when it serves most of its customers at a heavy loss, while at the same time such rates would reduce the price of the consumers' heating gas during the winter months to 50 cents and 45 cents per 1,000 feet, and thereby this rate decreases and tends to eliminate such high winter bills."

It is the winter bills, the gas company said, "which contribute the most prolific source of complaints and dissatisfaction.'

The proposed rate schedule, which was to have gone into effect on gas consumed June 25, the day the Railroad Commission secured the injunction on the part of the small towns without city governments to regulate the rates, was to provide a $1.50 minimum bill, no service charge and a sliding scale on gas used, down to 45 cents if the domestic user should be burning as much as 25,000 feet. The scale was to start at $1.50 for the first 1,000 feet.

In asking permission to put the new rate into effect, the company submitted a financial statement of total plant investment of $1,025,461.31 in the 90 towns, and returns at a loss on investment except in 19 of them, which offset the loss to 1.17 per cent.

"Nowhere," said the petition, "was it alleged there was any attempt to violate any rule of the Railroad Commission, or that it was necessary a writ of injunction be issued to preserve or enforce any order."

Exception was taken to the commission's allegation that revision of the rate schedule, "was and is unwarranted and unjustified and without the consent of the Railroad Commission and without application having been made for an increase or change in rates."

The company said the commission failed to show "by what authority it is required to file application with the Railroad Commission and secure its consent prior to promulgating or ordering a change or increase in its rates in towns or communities of 500 or less."

The rate was put into effect until blocked by the court order, after extensive investigation, the gas company said, and "with the hope that the sliding scale and cheap heating gas provided would enable an increase in sales and likewise revenues, and thereby prevent the necessity of putting into effect a much higher rate in order to obtain a fair return on the fair value of its property." It was claimed that under the existing rate the company was unable to earn a fair return.

With its petition for lifting the injunction, the company offered that if it should finally be held that the schedule is unfair and unreasonable and that excessive charges had been collected from its 6,300 consumers in the affected towns, the company "stands ready and willing to refund and reimburse to its customers such excess charges."

CREDITORS APPROVE REPUBLIC GAS PLAN

Holders of Republic Gas Corp. first lien collateral 6 per cent convertible bonds, series A, and certificates for such bonds issued under the deposit agreement dated January 20, have been advised by the bondholders' protective committee headed by James R. Buck that the committee has approved reorganizing the Kansas properties of the corporation "as an initial and necessary step in the reorganization of the Republic Gas Corp."

The Kansas properties are owned by three subsidiaries, the Missouri Valley Gas Co., the Argus Production Co. and the Western Production Co., and, in the opinion of the committee, have great potential value if properly managed and developed.

The plan can be put into effect with the consent of creditors of the Argus, Western and Missouri companies and the sanction of Republic Gas and the trustee under the first lien indenture of Republic Gas Corp., which have been obtained.

No action or approval by holders of first lien collateral 6 per cent convertible bonds is necessary, but the bondholders may deposit their securities in favor of the agreement or withdraw them if they have already made deposits.

ST. LOUIS CONSUMERS ARE NOW USING MIXED GAS

ST. LOUIS, Mo., July 11.—Natural gas, mixed with manufactured gas, is now being served to all domestic gas users in St. Louis, it was announced by the Laclede Gas Light Corp. The mixed gas is richer in heat value than the manufactured gas heretofore served, containing 800 B.t.u. to the foot as compared with 600 for the manufactured product.

Rates for the new gas, as filed with the Public Servic Commission, are to be about 7 per cent lower for general service and 30 per cent for house heating. They will go into effect August 1.

The natural gas comes from the Monroe and Richland Fields of Louisiana through about 450 miles of pipe line.

WINCHESTER GAS SOLD

Sale of the Winchester Oil & Gas Co. which serves Woodward, Okla., is announced. Standard Gas Co. of America, the new purchaser, is a holding company operating various gas properties. Its board of directors includes Miller Williams of Williams Brothers, pipe line contractors of Tulsa; Carl B. Haun of Blackwell, and R. M. Sherritt of Chicago General office is at Tulsa. Properties of the company at Woodward, Waynoka, Avard, Quinlan, Hardtner, Cherokee, Mooreland and Alva are included in the sale.

GETS WELDING CONTRACT

The California division of H. C. Price, Inc., has been awarded the electric welding contract for the 8 miles of 16-inch gas line being laid by the San Diego Consolidated Gas & Electric Co. from near La Jolla to San Diego, Calif.

DEVELOPING A LOAD IS BIGGEST PROBLEM

The biggest problem of the natural gas industry is developing a load which will enable newly completed lines to operate on a profitable basis, and not only earn a return on billions of invested capital but also provide funds for the constant improvement of service, says Donald O'Melveny of the Union Co., Los Angeles, chairman of the oil and natural gas committee of the Investment Bankers' Association of America.

Mr. O'Melveny declares that in the early days of the natural gas industry the problems to be solved were those of the discovery of satisfactory reserves and to provide adequate means to distribute the product economically.

"The discovery of vast reserves in Oklahoma, Texas, Louisiana, California and other states has removed the question of adequate supply," he says. "The development of welded steel pipe, making possible 24-inch and 26-inch pipe lines, extending over 1,000 miles and operating at pressures as high as 900 pounds per square inch, has also solved the question of transportation.

"There still remains, however, the biggest problem of now developing a load which will enable the new lines to operate on a profitable basis and not only earn a return on billions of invested capital, but also provide funds for the constant improvement of service. Many carefully made calculations of expected revenues have failed to materialize due to a lack of industrial demand, and some lines are operating at only 30 to 50 per cent of capacity, especially during the summer. It is also likely that some large capacity lines will not be operated at maximum capacity for many years."

Mr. O'Melveny declared that the winter heating load is being satisfactorily developed but that a gain in industrial demand would have to await renewed business activity. Increased competition from other fuels is being met, he says.

GAS LINE EXTENSIONS IN NEW YORK STATE

Extension of natural gas service to communities in central New York State is expected to receive great impetus as a result of the New York Public Service Commission's decision in the Syracuse Lighting Co. case, which virtually established the principle that gas companies have the right to charge consumers for the number of thermal units instead of the number of cubic feet of gas.

With the way clear for the companies to capitalize the greater heat content of natural gas, it is expected that the Standard Oil-Columbia gas interests, which have established a dominating position in the gas fields in New York and just over the line in Pennsylvania, will lose little time in extending their facilities eastward from Syracuse to Albany and thence across into New England.

Development of the program will be carried out by the New York State Natural Gas Corp., an organization formed last winter to consolidate the interests of the Standard Oil Co. of New Jersey and the Columbia Gas & Electric Co. in the Tioga fields of Pennsylvania and the other fields of New York.

This company laid a 100-mile line of 20-inch pipe from Tioga to the Syracuse county line, made a contract with the Syracuse Lighting Co., and then sat back and awaited the outcome of the Syracuse company's application for permission to apply the thermal rate as a basis for billing consumers. Under the terms of the contract Syracuse Lighting obligated itself to take gas from the pipe line only if the thermal rate basis were allowed. It was taking no chances of spending $1,000,000 to change over to mixed natural and artificial gas unless assured of at least five years to amortize the investment.

Now the industry is limited only by the supply of gas that can be taken out of the known and potential fields over a period long enough to permit amortization of the investment.

Syracuse Lighting Co. is a subsidiary of the Niagara-Hudson Power system and has interests outside the city limits. Last April the company started constructing the last link in a pipe line that will carry natural gas from Syracuse to Oswego, supplying smaller communities on the way.

Going eastward from Syracuse there is an almost continuous pipe line system from that city to Albany. The matter of filling in a short gap is all that stands in the way of carrying the Tioga gas into Albany.

LONE STAR HEARING HAS BEEN POSTPONED

AUSTIN, Tex., July 11.—A public hearing by the Texas Railroad Commission on the appraisal of the Lone Star Gas Co.'s properties in Texas set for July 11 has been postponed. Members of the commission have decided to defer the hearing until an appraisal of the company's lines and properties in Oklahoma could be completed, for consideration with the Texas inventory.

Texas recently completed an inventory and appraisal of the company's holdings for the purpose of obtaining data for consideration in fixing rates for natural gas at gates of cities served by the distributing system of the Lone Star. Since the company's system in Oklahoma enters into the Texas distribution several instances where city gate rates are in dispute, it was desired to have information covering the company's holdings in the adjoining state.

SAYS RATES TOO TECHNICAL

Colorado Public Utilities Commission is seeking to have simpler rate schedule adopted by natural gas companies operating in that State. Gas rates in northern Colorado cities supplied by the Colorado-Wyoming Pipe Line Co. are now under investigation by the commission. The rates of the Colorado Interstate Gas Co. and the Public Service Co. of Colorado are also under investigation. The Utilities Commission asserts the rate schedule is so complicated it takes an expert to understand it and that the schedules should be so plain an ordinary individual ought to be able to interpret it.

REJECTS SLIDING SCALE

GREENVILLE, Tex., July 9.—The Greenville city council has rejected a sliding scale rate proposal recently made by Chester L. May, vice president of the Community Natural Gas Co. The council made a counter proposal that the gas company abolish the 50-cent service charge and reduce the rate from 67½ to 50 cents per 1,000 feet.

CARBON BLACK HEARING

AUSTIN, Tex., July 11.—The Texas Railroad Commission has called a hearing for July 19 at Austin on application of the Magnolia Petroleum Co. for a renewal of its permit to burn carbon black. The company proposes to burn carbon black from waste residue gas from casinghead gasoline plants in Wheeler County.

Anticipation

SINCE history began, mankind has moved forward and upward. The "graph" thus charted was never a straight line. It had its ups-and-downs. But its trend has always been higher. * * * So with business and industry. Their graph is one of advances and recessions—but each "valley" has been succeeded by a higher "peak". * * * Is there any reason to believe that this law of progress has become inoperative—that American Industry, including that of Natural Gas, will not climb from the present valley to new peaks of achievement?

AMERICA is still a "new country". Nowhere has "saturation" been reached, nor "exhaustion" even approached. The spiritual forces that have always impelled to progress are still at work. Faith, courage, vision, confidence, never had greater opportunities than lie before them today. * * * The Hope Engineering Company feels no doubts as to the future. It knows that American Industry will "come back". And so it keeps its forces intact, its resources ready, in anticipation of that recovery which, however delayed, will surely come.

HOPE ENGINEERING COMPANY

Engineers and Contractors in Pipe Line Construction

FIELD AND MARKET ANALYSIS · ENGINEERING COUNSEL AND DESIGN · ORGANIZATION AND FINANCE
CONSTRUCTION AND EQUIPMENT · MANAGEMENT AND OPERATION

Mount Vernon, Ohio ~ New York, N. Y.

HOPE

· AMERICAN INDUSTRY NEEDS MORE NATURAL GAS ·

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

ABSOLUTE TEMPERATURE OF GAS

Absolute temperature is referred to in writings about natural gas. Apparently absolute temperature is something different from ordinary temperature. Will you explain the meaning of the term, please?—N. O. D.

A good explanation of absolute temperature is found in the chapter on physical properties of gases in Handbook E-4, published by the American Meter Co., and it is quoted here to answer your question:

"It was noted by early experimenters that a definite quantity of gas occupying a certain volume at any definite pressure decreased in volume when cooled. For example, 6 cubic feet at 140° F., when cooled to 90° F., occupied only 5.5 cubic feet. Further cooling to 40° F. reduced the volume to 5 cubic feet, and at 60 degrees below zero the volume was 4 cubic feet. Thus, for each 100 degrees drop in temperature below the 140° F. the volume decreased 1 cubic foot, or one-sixth of the original amount, so that theoretically at 600° below 140° F. (or 460 degrees below zero) the volume should be zero.

"It is not possible to produce such a condition, but numerous experiments have indicated similar results, and 460 degrees below the zero of the ordinary thermometer scale has been designated as the zero of the absolute Fahrenheit scale. These conditions are given in the following table:

Temp. °F. ordinary scale	Temp. °F. absolute scale	Volume cubic ft.
140	600	6.0
90	550	5.5
40	500	5.0
60 below zero	400	4.0
460 below zero	0	0.0

"This table indicates that the same weight of gas at the same pressure occupies volumes directly proportional to the absolute temperature. The absolute temperature is obtained by adding 460 degrees to the ordinary Fahrenheit scale. Eighty degrees F. = 80 + 460 = 540 °F. absolute; 190 degrees below zero = 190 + 460 = 270° F. absolute. Experimenters have determined the absolute zero at various values from 459.2 to 459.6 degrees below zero, but as 460 has been used in nearly all gas calculations, this value is retained here."

SAFETY AROUND THE BOILER

It seems to me it would be a good plan for you to give a list of rules for safety around oil field boilers. You gave some rules for safety around the derrick floor once and they did some good, I am sure. I think the rules for working around a boiler would do good too, for as anybody in the oil field knows there are a lot of dangerous practices.—D. T. E.

Your suggestion is complied with gladly. An excellent list of such precautions, presented in the form of questions, appeared recently in the Booster, published by the Standard Gasoline Co., and it is reproduced here as providing just about what you seek:

WHEN BEING FIRED

Has gauge been drained to check the water level before lighting fire?

Has trycock been opened to expel air until steam comes?

Do you stand to one side of the opening when lighting pilot light?

Do you stand to one side of the opening when lighting burner?

Have you checked all valves to see that they are in proper position before firing?

Is the valve on the steam gauge open?

Has the stack damper been opened before lighting pilot?

Do you tighten up the manhole plate bolts when the boiler has come up to a small pressure?

Do you take at least 10 hours or as much more time as is possible to bring the boiler up to line pressure?

Do you pull the safety valve before the boiler reaches line pressure?

Do you cut in a boiler being placed on the line when the boiler pressure is several pounds less than the line pressure?

Do you open the main header valve slowly?

Is your quick opening blowoff valve closer to the boiler than the other valve?

Do you open your quick-opening blowoff valve first and close it last?

Do you blow down your boiler at least once a tour?

Do you blow down your water column at least once a tour?

Do you turn your face away for safety when wiping off a gauge glass on a boiler under pressure?

WHEN SHUT DOWN

After cutting fires, do you wait until brickwork has cooled somewhat before shutting main steam header?

Do you close damper and all other air openings at the time the fires are turned out?

Where there is no damper, do you open the smoke box door when the fires are turned out?

Do you disconnect gas lines to the burners and pilot from the main gas header when the boiler is shut down?

OIL PROSPECTS IN ALABAMA

The water here in this part of Alabama is stained with oil and most water wells 40 to 60 feet deep are so gassy that nobody can go down into them. Does that mean anything? Two or three workmen have lost their lives here from gas while digging water wells.—P. C. B.

Although oil may exist in Alabama and other Gulf Coast states east of the Mississippi River, the facts given in your letter have no bearing upon the presence or absence of oil or gas in commercial quantities. Gas is common in shallow wells in all parts of the country and deadly in many cases, but it is not necessarily a hydrocarbon gas derived from oil or gas sands of commercial importance.

If you are interested in prospecting for oil or gas in undeveloped territory such as Alabama it is suggested that you obtain the advice of experienced geologists to guide your operations because it is easy to spend money in wildcatting that might be saved by following good geological advice.

There are numerous geological articles already available on the geology of Alabama published by the U. S. Geological Survey, Washington, D. C., and the Alabama Geological Survey, Walter B. Jones, state geologist, University, Ala. One hundred sixty-seven wildcat wells of record were drilled in Alabama from 1865 to 1928 which resulted in the discovery of three short-lived gas fields.

PREVENTING WASTE OF GAS

I want to ask what is likely to seem a very amateurish question. I wish you would tell me briefly what are considered the most effective ways of preventing waste of gas from formations above the one drilled to for oil. Is this waste always the result of the gas working its way up through the hole to the surface? —S. T. K.

The loss of gas from formations drilled through before the principal producing sand is reached does not always come about as a result of the gas finding its way to the surface. Sometimes it works into some porous stratum. Waste of gas arises also through defective water shutoffs which permit it to move past the shoe of the water string. The information for which you ask on prevention of waste of gas from upper formations of the well is given in the following words by H. C. Miller, senior petroleum engineer of the U. S. Bureau of Mines, in his book, "Function of Natural Gas in the Production of Oil":

"Upper sands may be protected and their gas confined by sealing them off with mud fluid and cement or by landing casing above and below the sands. The first of these methods requires less casing, as several formations may often be sealed and protected by a single string. This reduces the cost of wells and allows completing the hole with larger-sized casing.

"The gas sands encountered when drilling with rotary tools are 'mudded off' by the circulating mud fluid as drilling progresses, usually without change in drilling routine. In cable-tool wells, on the other hand, mud fluid must be placed in the hole immediately before gas sands are encountered by the bit, and drilling must be continued until the sand is passed. The casing then must be landed, with mud fluid behind it, in a suitable landing formation below the sand. If this does not seal off the gas, mud fluid should be circulated through the casing (or tubing that may have been run for the purpose) and back to the surface past the exposed formations that are to be mudded.

"If circulation of mud fluid fails to 'kill' the gas and if a pressure greater than that exerted by a column of mud fluid is required to seal the formations effectively, mudding under pressure is necessary. The additional pressure must be obtained by the use of high-pressure pumps.

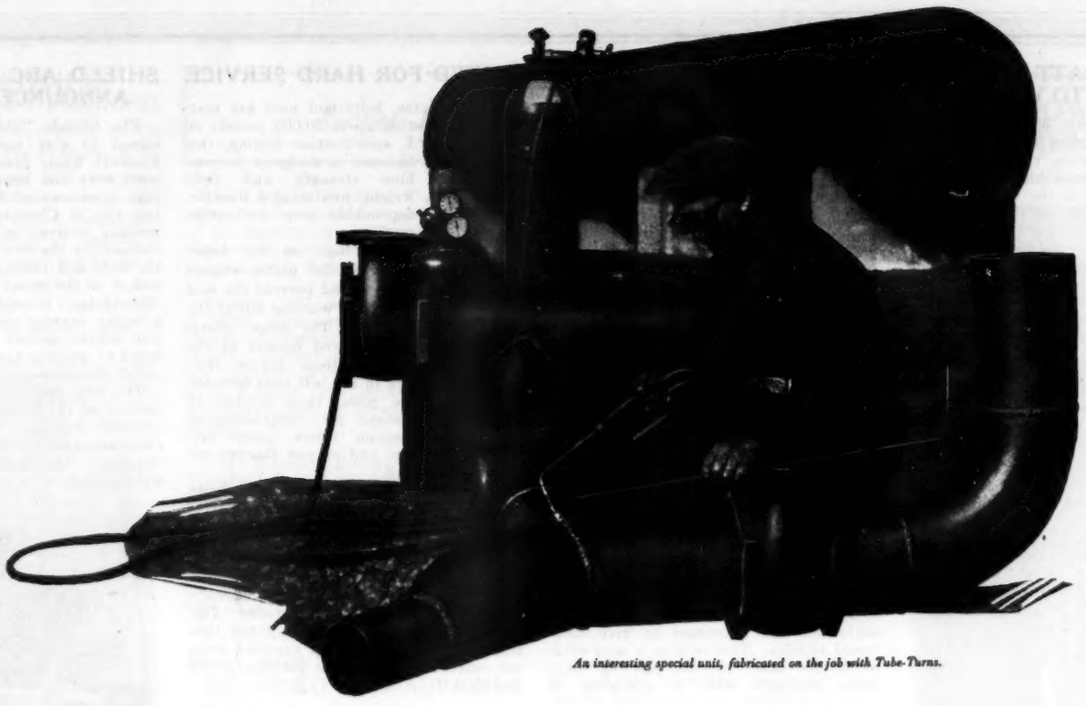
"In many wells there is no suitable formation in which to land the casing below the gas sand. Formation shutoffs, unless exceedingly tight, do not always prevent gas, because of its migratory character, from tending to dissipate around the shoe of the water string. This is particularly true when gas pressures are high. The only method that will insure against loss of gas when shutoffs are imperfect and leak, is to cement the casing.

"Another method of sealing off and confining gas in upper sands is to land strings of casing above and below the sands. Here, too, precautions must be taken and suitable formations chosen in which to land the casing so that shutoffs will be tight. Otherwise gas will escape past the upper shoe or around the lower one and eventually escape. If ordinary formation shutoffs cannot be made tight, it will be necessary to mud or cement the casings above the shoes, as is often done when a single string of casing is used to seal off one or more gas sands."

Why Was It Called That?

NITROGLYCERIN

Nitroglycerin, the heavy, oily explosive liquid used in well shooting, is made by treating glycerin with a mixture of nitric and sulphuric acids. The name is derived from the combining form "nitro-," which denotes the presence of niter, and "glycerin." The first torpedoes contained gunpowder, and in 1864 Col. E. A. L. Roberts applied for a patent for "a process of increasing the productiveness of oil wells by causing an explosion of gunpowder or its equivalent at or near the oil-bearing point, in connection with superincumbent fluid-tamping." Colonel Roberts asserted that the action of a shell at Fredericksburg in 1862, which exploded in a millrace, suggested to him the idea of bombarding oil wells. Long and costly litigation followed the granting of a patent to him. The courts decided in his favor, and the invention made millions of dollars for its owners. Colonel Roberts' grave in the Titusville, Pa., cemetery is marked by a monument emblematic of the torpedo.



An interesting special unit, fabricated on the job with Tube-Turns.

LOOK AT THIS!

Here's another reason why Tube-Turns are usually chosen for the toughest and most demanding pipe-welding jobs: *They have uniform wall-thickness and hence uniform strength at ALL points*.*

Given a moment of consideration, this matter of uniform walls will be seen to be the most important factor in the purchase of pipe fittings. It directly influences the quality of the weld*, the cost of welding*, and the *life* of the entire installation*.

If you are in doubt as to what fittings offer you uniform wall-thickness, not only at the ends but also at ALL points, cut up a few samples and see for yourself. This simple experiment is worth thousands of words—and frequently, thousands of dollars. TUBE-TURNS, *Incorporated*, 1311 S. Shelby Street, Louisville, Ky.

TUBE-TURNS

UNIFORM* WALL-THICKNESS

is *essential* in obtaining

(1) Satisfactory Joints. Regardless of the workmanship or materials used, no welder can consistently make good joints unless the fitting lines up with the pipe—*in O. D., I. D., and wall thickness.* . . . Thickened walls also increase time and cost of welding.

(2) Full-Life Piping. Corrosion and erosion are always most severe at *the back* (outside) *wall* of a fitting. Thinning at this point *reduces life.*

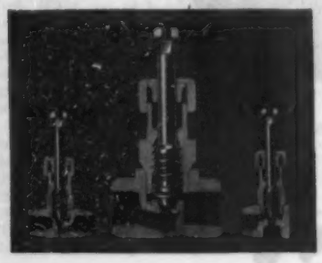
*Tube-Turns have *uniform wall-thickness*—ALWAYS within A. S. T. M. tolerances *at all points.* No thinning of outside walls. No thickening of inside walls.

NEW AND IMPROVED EQUIPMENT

READING-PRATT & CADY ADDING TO VALVE LINE

The Reading-Pratt & Cady Co., Inc., Bridgeport, Conn., now offers three-quarters and 1-inch globe valves which are precision turned from high-grade carbon steel—an addition to the company's regular line of bar stock valves. These valves are recommended for services where high strength and close control are desirable features. They have stainless steel, slip-on renewable discs and stainless steel screw-in seats. The stems are especially designed and treated for temperature service, a treatment which not only insures long working life, but also resists corrosion. All other parts are Parkerized inside and out, giving the valves a pleasing appearance and protecting them against corrosion.

Smaller carbon steel valves, in both the globe and angle patterns, have integral seats and discs. Otherwise they are similar to the larger valves. The work-



ing pressures are 4,000 pounds at 150° F., 600 pounds at 500° F.

Bronze valves for 500 pounds pressure at 150° F. are made in the globe, angle, and cross patterns in sizes up to one-half inch. The stainless steel globe and angle valves, like the carbon steel valves are made in sizes up to 1-inch and for pressures up to 4,000 pounds at 150° F., or 600 pounds at 500° F.

In addition to the standard line, the valves can be furnished with indicator handwheels, lock shield and key, male or female unions, and male and female ends. There is also a manifold type consisting of three valves on a single body.

FLEXICO BELT FASTENER DESIGNED FOR HARD SERVICE

The Flexico deep-well belt fasteners for oil-field and other heavy transmission service are offered by the manufacturer,

the Flexible Steel Lacing Co., 4,607-31 Lexington Street, Chicago, as providing a solution of the problem of strong belt joining in deep-well drilling.

The Flexico belt fasteners are of powerful construction. Each plate consists of an inner and outer section. The outer section is made of heavy gauge steel, die-formed and hardened to give reinforced rigidity. This section is spot-welded to the inner section, offering maximum strength with a minimum of weight. Plates, bolts and nuts are rust-proofed. Testing up to 20,000 pounds on 12-inch A.P.I. specification belting, this fastener is designed to combine strength and light weight, producing a durable, dependable joint for severe service.

The lugs on the inner faces of the plates engage the belt and prevent the belt ends from working out of the fastener. The large, generously curved flanges of the inner sections reduce friction in the belt ends between the plies, thus helping to prevent ply separation, so common where sharp corners and narrow flanges are used.

The Flexico specially hardened bolts and nuts used with the fastener are five-eighths inch in diameter with S.A.E. thread. They are made of high-grade alloy steel and hardened to obtain the maximum strength. The nuts are hardened to prevent stripping of the threads and burring of the outer corners. The company is said to have subjected this belt fastener to severe and exacting tests for several years before putting it on the market.

SHIELD ARC WELDER IS ANNOUNCED BY LINCOLN

The Lincoln "Shield Arc" welder, designed to give more weld deposit per kilowatt hour, faster welding per kilowatt hour and lower cost of unit welding, is announced by the Lincoln Electric Co. of Cleveland, Ohio. A uniform welding current is one of the features claimed for the new machine. By leveling the hills and valleys or the rapid fluctuations of the usual welding current, the "Shield-Arc" is said to allow the use of a higher average current per given sized rod which permits an increase in the speed of welding and the amount of weld metal deposited.

The new welder is rated at 40 volts instead of the former 25. This rating is desirable for use with the shielded arc electrodes recently developed by the same company. The larger capacity of the welder along with its higher average cur-

rents makes possible new efficiencies. In addition the machine offers improved operating characteristics for welding with bare or washed electrodes

As a result of careful designing, it has been possible to eliminate the necessity for a stabilizer or kick transformer of any nature. The elimination of such losses together with the reduction of other machine losses makes possible approximately 10 per cent higher efficiency at full loads and even more on overloads, and also a much less no load loss. The new welder is equipped with dual control which permits independent regulation of current and voltage.

Since with shielded arc welding reversed polarity is widely used, the new "Shield-Arc" machine is equipped with a reversible voltage control which actually reverses the direction in which the current is generated. This innovation eliminates the shifting of cable connections to change the polarity of the welding current. By putting the small voltage control lever in the neutral position no voltage is generated so that no current can flow through the welding leads.

As can be seen in the illustration, the upper half of the new "Shield-Arc" welder is entirely enclosed, which not only makes it drip-proof, but also prevents any foreign articles from being dropped in the machine to cause injury.

Among the Equipment Houses

CAMPBELL COMPANY EXPANDS

Expansion of the facilities and organization of the J. A. Campbell Co. of Long Beach, Calif., has been arranged and a new company formed to purchase the assets, patents, good will and production equipment. The enlarged organization, the J. A. Campbell Engineering Corp., has leased offices at 973 North Main Street, Los Angeles, where it will have access to a complete machine and plate shop. The principals of the new organization are Henry N. Wade and C. L. Parkhill, both identified with the Campbell organization for many years and experienced in the design and construction of natural gasoline plant equipment, scrubbers and other units necessary in the production of casinghead gasoline. J. A. Campbell will be indirectly identified with the new organization and will be available in a consultant capacity, but will devote the major portion of his time at the old location in Long Beach where he will develop further several gas and power specialties, including the Daniel orifice fitting and the Volz steam-water liquid level control. The Stearns-Roger Co. of Denver, Colo., will continue to have charge of the sales and construction of Campbell absorption plants, absorbers, Mist-D-Fiers, etc., in the Mid-Continent Field.

The Neilan Co., Ltd., of Los Angeles, Calif., manufacturer of automotive controlling devices for temperature, pressure and flow, has opened a new office in Chicago at 1525 East Fifty-third Street. Arthur J. Foley will continue in charge as Chicago representative. This office will be occupied also by the Mason Regulator Co. (the parent company of Neilan).

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The Youngstown Sheet & Tube Co. of Youngstown, Ohio, has moved its Tulsa offices from 905 Exchange Bank Building to 1304 Philtower Building. J. A. Mussler is in charge.

—

K. J. Helmholtz, president of the Economy Electric Lantern Co., Chicago, announces that the Mine Safety Appliance Co., Pittsburgh, Pa., has been appointed distributors of the former concern's underwriter approved band electric lanterns.

—

The Struthers-Wells Co., Warren, Pa., has appointed Byron L. Ashdown, Syndicate Trust Building, St. Louis, Mo., sales representative in the Mid-Continent and Central South states on process equipment for oil refining, chemical and allied industries.

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The board of directors of the Pacific R. & H. Chemical Corp., El Monte, Calif., elected C. K. Davis chairman of the board; Dr. E. A. Rykenboer, president; F. S. Pratt, vice president; A. Frankel, treasurer; H. A. Schumacher, assistant treasurer; L. Rice, secretary, and J. L. Fahs, assistant secretary.

—

Winslow Sampson, for many years associated with S. K. F. Industries, has been appointed Pittsburgh district manager of the Kron Co., Bridgeport, Conn., manufacturer of industrial scales. The Pittsburgh offices will be at 302 Penn Avenue.

F. W. Gibson, formerly vice president and general manager of the Cypress Tank Co., and B. O. Hammond, former district manager, have organized the Hammond-Gibson Tank Co. to serve as distributor for the Columbian Steel Tank Co. in the East Texas Field. Their headquarters are in the Magnolia Hotel, Longview, Tex.

—

A warehouse, with display rooms, has been established at 1333 Santa Fe Avenue, Los Angeles, Calif., by the Shand & Jurs Co., Berkeley, Calif., with Ralph H. Smith in charge. All service in southern California will be centered in the Los Angeles office.

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The Hope Engineering Co. has moved its New York office from 149 Broadway to 30 Broad Street.

—

The Fisher Governor Co., Marshalltown, Iowa, has appointed two new exclusive representatives. One is the Grinnell Co. of Minneapolis, Minn., 240 Seventh Avenue, South, and the other is the Steam Plant Equipment Co., 1012 North Third Street, Milwaukee, Wis.

—

The Babcock & Wilcox Co. will close down its Bayonne, N. J., plant, and concentrate its operations at its works in Barberton, Ohio. The current volume of business can be better handled at the Barberton works, with more economical operations, it is reported.

SONNER HAS NEW DEPARTMENT

The Sonner Burner Co. has formed a sales engineering department at its manufacturing plant and foundry in Winfield, Kans. Walter H. Hoagland, who recently resigned as gas sales supervisor of the Kentucky-Tennessee Light & Power Co., is in charge. Mr. Hoagland is a member of the Eastern Natural Gas sales committee (commercial section) of the American Gas Association.

G. E. STARTS NEW DEPARTMENT

The new air-conditioning department of the General Electric Co. will start commercial operations the latter part of July in 25 cities in the northeast, according to J. J. Donovan, manager. District sales representatives are selecting local business firms to market the new line of air-conditioning and oil-heating equipment. Franchises will be given to only one firm in each city.

Fisher Fre-flow strainers are described in a four-page bulletin issued by the Fisher Governor Co., Marshalltown, Iowa.

NEW AND IMPROVED EQUIPMENT

PNEUMATIC SWITCH IS DEVELOPED BY FOXBORO

A simple, compact pneumatic switch has been designed by the Foxboro Co. of Foxboro, Mass., for use with the company's standard temperature and pressure controllers. This switch makes possible the use of air-operated controllers on equipment that is controlled by turning on or off an electric current. It has been used successfully to control temperatures in electrically heated ovens, to

control motor operated pumps, blowers and compressors, and as a means of producing audible or visible signals on time cycle applications.

The switch is a standard single pole mercury type switch mounted in a small cast-iron housing with an outlet tapped for either conduit or HX connector. In conjunction with suitable auxiliary magnetic switches, it may be used in any circuit where the current is not higher than 600 amperes at 220 volts. It is operated by a small diaphragm motor mounted directly on the housing. The standard switch is closed by air pressure from the control instrument and opened by a spring. The switch is always open, therefore, when the air is off.

REPRESENTS FOSTER WHEELER

The Foster Wheeler Corp., 165 Broadway, New York, has appointed the Consolidated Steel Corp., Ltd., exclusive sales and manufacturing representative for Foster Wheeler products in California, Washington, Oregon, Nevada, Utah, Arizona and New Mexico Consolidated Steel will handle the entire line of Foster Wheeler equipment including power plant, marine, oil refinery and gasoline plant apparatus. Foster Wheeler sales previously were handled by district offices in San Francisco and Los Angeles under the direction of C. L. Froding of San Francisco, was assisted by R. D. Spear in San Francisco and M. J. Gavin of Los Angeles. Mr. Froding and Mr. Spear now are located in the San Francisco office of Consolidated Steel and Mr. Gavin is in the main office of Consolidated Steel in Los Angeles. Foster Wheeler will continue its engineering organization in Los Angeles under the direction of W. L. Rifenberick.

Notes About Trade Literature

The Leeds & Northrup Co., Philadelphia, Pa., has issued a revised edition of its bulletin No. 871, "Temperature Measurements in Generators, Transformers and Cable Systems."

—

Bulletin T-97, being mailed by the L. J. Wing Manufacturing Co., 154 West Fourteenth Street, New York, is devoted to Wing turbine blowers, with engineering information regarding the use of these blowers for forced draft service with hand-fired, stokered and oil-fired boilers.

—

The Wagner Electric Corp., 6389 Plymouth Avenue, St. Louis, Mo., has issued a six-page loose-leaf bulletin on capacitor motors, illustrating and describing the Wagner line or RZHR (rubber-mounted) and RZH (rigid-mounted) motors, and including a history of the development of capacitor motors dating from 1892. The bulletin is No. 167, part 6.

"Traps for Oil Refineries" is among interesting articles in the current number of the Armstrong Trap Magazine, published by the Armstrong Machine Works, Three Rivers, Mich.

—

The Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., announces a new bulletin, C 1,948, describing the operation and construction of the new Polaricode split-second supervisory control.

—

An illustrated bulletin distributed by the Lincoln Electric Co., Cleveland, Ohio, describes the company's Type E stainless steel induction motor, totally enclosed and fan-cooled.

—

"Brass Tacks on Truck Life" is the subject of an illustrated bulletin distributed by Mack Trucks, Inc., 25 Broadway, New York.

FULL-POWER ENGINE IS DESIGNED BY WAUKESHA

The Waukesha Motor Co., Waukesha, Wis., has announced a new line of engines reported to be of increased efficiency, smoother operation and longer life. These new engines, the product of eight years research in both combustion chamber design and in metallurgy, are introduced as being H. L. Horning's interpretation of the basic Ricardo principles carried to their ultimate, logical development.

Even with an ability to deliver 25 to 30 per cent more horsepower than conventional engines of the same size, the new Waukesha full power engines are more conservatively rated than previous Waukesha products. This departure from common practice in manufacturer's power ratings, makes it possible to utilize an engine for all regular requirements without having to draw on its full capacity.

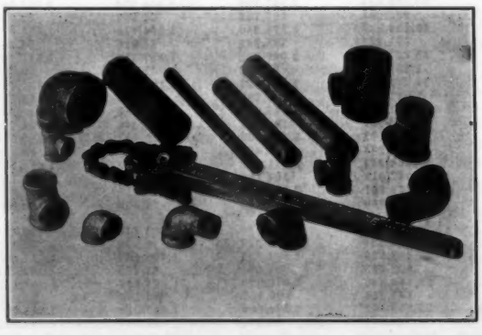
Under circumstances where the full power engine is called upon for hard work and a continuous output of its full horsepower, the hazard of short life is said to have been overcome through a stiff structural design combined with new materials developed in the Waukesha metallurgical laboratory. In the investigation which brought about development of the new full power line, H. L. Horning and his associates conducted continuous fuel research especially in conjunction with combustion chamber design, with a view to increasing engine efficiency, reducing engine size, and arriving at smoother operation.

ROTATING PUMPER CO. FORMED

The Rotating Pumper Co., with headquarters at 1333 Santa Fe Avenue, Los Angeles, Calif., has been formed for the manufacture of pumping, pulling and drilling units for oil field work, and to take over distribution of the Pacific Gear & Tool Works, oil field products. William G. Corey is president and general manager, L. C. Harbert vice president and sales manager and Wendell M. Jones is consulting engineer. Mr. Corey is manager of the oil field department for the Pacific Gear & Tool Works, and will continue in this capacity. Mr. Harbert is well known as sales manager for J. P. Ratigan, and he had charge of all foreign sales for that company. Mr. Jones for four years has been sales engineer for the Petroleum Equipment Co. of California, and will continue in this capacity, as this company is the exclusive California distributor of the Rotating Pumper Co. production.

FULRANGE PIPE WRENCH HAS DISTINCTIVE FEATURES

The American Industrial Corp., 230 Park Avenue, New York, is placing on the market a chain pipe wrench, called the Fulrange, with distinctive features. The No. 1 size handles pipe from three-eighths inch up to 1½ inches and also handles tees, elbows, and street fittings that fit these pipe sizes.



The Fulrange grips the pipe from the front and can be used in corners and where obstructions are found. It is reversible and can be operated in either direction without removing the pipe or adjusting the chain. It never can be put on wrong, according to the manufacturer. A positive grip at any angle is assured and the ratchet action is considered important. The Fulrange is rugged in construction.

MEN KNOWN *in* THE EQUIPMENT FIELD

DAVID POWELL

David Powell, recently appointed district representative in Oklahoma for the Detroit Graphite Co., of Detroit, Mich., joined that organization in 1920 and was placed in charge of its Kansas City, Mo., office. He continued in that position until his transfer to Oklahoma. His new headquarters are at 318 Philcade Building, Tulsa.

BOILER IS DESIGNED ESPECIALLY FOR OIL

The Bass "90" oil-fired steel heating boiler, manufactured by the Bass Foundry & Machine Co., Fort Wayne, Ind., is designed especially for oil firing. Installed with an efficient oil burner of the gun type this boiler is said by the manufacturer to give a clean, even heat, automatically and noiselessly supplied in just the volume needed for maintenance of a comfortable temperature.

The boiler is of all welded steel construction in accordance with the A.S.M.E. code for steel heating boilers. Flange quality steel plates five-sixteenths inch thick are used in the boiler proper for strength, while seamless copper tubes of No. 16 gauge are employed for efficient heat transfer and long life. The sides, top and bottom are completely insulated and a heavy metal jacket over rock wool insulation is employed for the boiler section. Five clean-out plugs are installed, four in the bottom and one at the crown sheet level. For steam operation, the boiler is furnished complete with steam gauge, water glass, try cocks and safety valve.

This boiler has been designed to develop the maximum efficiency of the gun type oil burner. On actual tests, over-all efficiencies of burner and boiler are said to have run from 82 to 88 per cent, CO_2 from 13 to 14 per cent. The design permits of a small boiler of large capacity. The boiler for 1,300 square feet of steam radiation is only 30-inch over-all diameter and 56 inches high, with a water line only 41½ inches from the floor.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for April

Runs

	Month bbls.	Dly. av. bbls.
Gulf P. L. Co.	1,489,648	49,655
Texas P. L. Co.	611,560	20,385
Magnolia P. L. Co.	1,076,368	35,879
Empire P. L. Co.	2,186,018	72,867
Cosden P. L. Co.	614,689	20,490
Stanolind P. L. Co.*	2,700,000	90,000
Oklahoma P. L. Co.	3,333,207	111,106
Other lines*	3,780,000	126,000
Total April	15,791,460	526,382
Total March	16,024,506	516,918
Difference	233,046	9,464

Shipments

Gulf P. L. Co.	1,473,992	49,133
Texas P. L. Co.	1,214,285	40,476
Magnolia P. L. Co.	1,428,042	47,601
Empire P. L. Co.	2,303,415	76,780
Cosden P. L. Co.	612,372	20,412
Stanolind P. L. Co.†	3,781,170	126,039
Oklahoma P. L. Co.	3,131,010	104,367
Other lines*	3,270,000	109,000
Total April	17,214,286	573,808
Total March	17,661,005	569,710
Difference	446,719	4,098

Stocks

Sinclair Prairie Crude Oil Marketing Co.*	35,297,000
Gulf P. L. and Gypsy Oil Co.	7,415,843
The Texas Company	5,678,330
Magnolia Petroleum Co.	8,182,199
Empire Pipe Line Co.	4,966,315
Mid-Continent Petroleum Co.	2,471,329
Stanolind Crude Oil Pur. Co.*	15,669,000
Oklahoma P. L. Co.	1,732,152
Carter Oil Co.	2,544,427
Other lines*	17,284,000
Total April	100,242,156
Total March	100,764,337
Difference	522,181

*Estimated. †Stanolind Pipe Line Co. shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF MAY

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for April and May:

	April, 1932	May, 1932
Nat. Transit	147,723.99	151,951.46
S. W. Pa. P. L.	69,759.24	71,779.11
Eureka P. L.	280,564.95	276,906.64
Buckeye P. L. (Macksburg)	248,423.27	251,442.44
Buckeye P. L. (Cleveland)	11,868.52	12,377.90
Buckeye P. L. (Lima, etc.)	85,450.06	86,476.79
Indiana P. L.	2,736.17	2,672.22
N. Y. Transit	37,613.87	44,012.00
Tide Water P. L.	22,997.64	25,664.15
Pure Oil	380,143.48	423,749.02
Stoll Oil Ref.	22,902.63	58,053.00
Bradford Trans.	410,284.82	427,172.23
Total	1,720,467.58	1,832,255.95
Daily average	57,348.92	59,105.03

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1932	May, 1931
Nat. Transit	566,440.30	569,129.70
S. W. Pa. P. L.	447,532.55	465,630.47
Eureka P. L.	201,570.72	289,963.58
Buckeye P. L. (Macksburg)	272,180.38	231,855.64
Buckeye P. L. (Cleveland)	1,468.37	1,708.49
Buckeye P. L. (Lima, etc.)	1,480,881.88	1,381,245.31
Indiana P. L.	1,070,857.65	1,188,666.66
Southern P. L.	35,585.52	43,892.07
N. Y. Transit	191,240.50	192,967.42
Northern P. L.	158,940.28	167,202.66
Tide Water P. L.	480,908.25	412,438.33
Pure Oil	490,475.43	572,755.77
Bradford Tran.	439,477.28	452,206.39
Tuscarora Dev.	223,556.91	273,273.52
Total	6,061,106.52	6,243,527.02
Daily average	202,036.88	201,404.09

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of April and May:

	April, 1932	May, 1932
Nat. Transit	634,782.71	675,994.46
S. W. Pa. P. L.	453,340.11	518,480.70
Eureka P. L.	1,293,097.03	1,224,629.00
Buckeye P. L. (Macksburg)	285,565.79	277,198.32
Buckeye P. L. (Cleveland)	30,490.78	36,639.14
Buckeye P. L. (Lima, etc.)	3,082,716.14	3,160,170.66
Indiana P. L.	476,841.83	502,451.61
Southern P. L.	178,607.70	197,231.45
N. Y. Transit	184,159.11	167,583.00
Northern P. L.	247,444.39	216,814.96
Tide Water P. L.	940,092.95	882,349.04
Pure Oil	834,185.44	717,191.37
Tuscarora	9,255.63	9,033.24
Bradford Trans.	258,081.52	253,149.84
Total	8,908,661.14	8,835,726.89
Increase	106,468.60	
Decrease		72,934.25

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of April and May showing gross stocks of the above fields:

	April, 1932	May, 1932
Pennsylvania	2,978,189.27	3,082,290.24
Lima	540,408.74	527 816.96
Kentucky	9,997.41	9,997.41
Mid-Continent	4,585,299.50	4,552,128.56
Illinois	15,546 86	2,904.86
Michigan	779,219.36	660,588.86
Total	8,908,661.14	8,835,726.89

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1929	1930	1931	1932
Jan.	51,749	76,907	53,939	53,501
Feb.	51,533	79,256	56,163	55,498
Mar.	54,252	76,688	54,331	57,199
Apr.	53,444	84,536	54,914	57,348
May	59,902	70,546	53,344	59,105
June	58,823	75,430	54,110	.....
July	66,087	68,921	50,723	.....
Aug.	66,087	54,291	51,503	.....
Sept.	67,315	56,596	61,345	.....
Oct.	76,093	58,179	65,596	.....
Nov.	74,331	52,332	59,819	.....
Dec.	74,561	53,999	61,835	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1929	1930	1931	1932
Jan.	165,721	217,623	175,369	186,551
Feb.	159,387	224,355	183,494	169,856
Mar.	161,474	228,846	189,508	188,793
Apr.	169,737	241,845	191,450	202,036
May	184,281	248,382	199,247	201,404
June	185,404	234,401	221,155	.....
July	194,763	207,094	191,632	.....
Aug.	194,946	205,506	224,166	.....
Sept.	201,214	193,999	217,537	.....
Oct.	191,367	157,675	210,831	.....
Nov.	202,743	146,638	196,425	.....
Dec.	186,257	143,001	176,241	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1930	1931	1932
Jan.	12,220,045	11,831,092	9,023,914
Feb.	12,991,561	11,506,489	8,974,350
Mar.	13,247,217	11,012,162	8,802,192
Apr.	13,233,961	11,044,481	8,908,661
May	13,052,953	10,728,239	8,835,726
June	13,396,855	9,903,349	.....
July	13,268,562	9,569,849	.....
Aug.	13,047,051	9,192,457	.....
Sept.	12,812,018	8,492,431	.....
Oct.	12,437,553	8,417,694	.....
Nov.	11,851,380	8,830,386	.....
Dec.	11,751,952	9,119,032	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, June 1	549,315.19
Runs from wells	496,220.49
Other receipts	197,594.54
Regular deliveries	241,708.18
Other deliveries	406,130.78

The amount of Illinois oil run by the Tide Water Pipe Co. in May was 25,664.15 bbls. Deliveries were 38,151.70 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1932—	Runs	Deliveries
May	521,884.64	279,859.88
1931—		
Jan.	468,428.04	669,573.19
Feb.	429,284.54	461,262.85
Mar.	424,638.23	356,663.26
Apr.	421,814.98	282,532.65
May	433,231.80	322,513.96
June	510,805.78	320,258.13
July	520,009.38	289,219.06
Aug.	476,623.56	393,231.06
Sept.	492,183.83	323,012.50
Oct.	498,124.13	325,834.95
Nov.	470,302.63	281,258.48
Dec.	516,771.28	306,623.19
1932—		
Jan.	500,177.12	246,634.10
Feb.	482,561.50	186,010.30
Mar.	565,538.70	270,617.75
Apr.	461,930.92	285,817.98

Tide Water Pipe Co., Ltd., also delivered in May 104,554.14 bbls. Oklahoma oil.

Ashland Refining Co. reports well runs of 144,779.26 bbls. during May.

Average Daily Imports of Crude and Refined Oil at Principal United States Ports

Average barrels per day in 1931-32—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
June	30,067	16,833	111,767	27,000	20,833	206,500	3,300	5,500	2,167	1,333	12,300	212,800
July	26,387	11,226	104,678	29,223	21,778	193,387	6,903	7,419	4,194	.....	18,516	211,903
August	22,413	15,581	91,743	32,387	25,741	188,064	4,161	2,516	.....	3,162	9,839	197,903
September	27,067	7,367	106,867	30,099	22,967	194,367	4,833	8,333	.....	.....	13,166	197,533
October	23,710	14,484	106,774	34,742	46,645	226,355	6,097	6,871	2,097	1,833	16,903	253,258
November	18,833	18,800	51,667	34,600	12,967	170,067	3,933	10,833	3,033	1,367	19,166	189,233
December	20,258	16,806	121,807	31,645	34,258	224,774	1,968	4,355	.....	.....	6,323	231,097
1932—												
January	19,161	8,161	104,065	24,194	34,903	190,484	4,871	7,226	2,096	1,484	15,677	206,161
February	32,448	16,517	128,482	28,552	34,552	240,897	2,034	5,207	4,319	1,279	12,930	253,827
March	25,806	10,516	147,806	38,677	46,129	296,935	5,936	39,774	.....	1,516	47,226	338,161
April	37,167	18,467	158,233	38,733	39,400	292,000	6,767	44,600	2,167	3,333	54,867	346,867
May	31,161	2,865	170,226	50,774	14,935	269,161	903	710	4,194	1,516	7,323	276,484

Average Daily Receipts of California Crude and Refined Oil at Atlantic and Gulf Ports

Average barrels per day in 1931-32—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
June	4,267	.....	25,100	5,333	5,500	39,200	.....	.....	.....	.....	.....	39,200
July	6,774	1,194	24,613	11,065	9,902	53,548	.....	.....	.....	.....	.....	53,548
August	3,452	.....	16,419	7,419	4,290	31,580	.....	.....	.....	.....	1,325	54,905
September	4,267	3,667	12,933	4,699	7,367	32,933	.....	.....	.....	.....	968	32,548
October	2,355	1,129	19,290	16,709	9,323	48,806	.....	.....	.....	.....	4,000	36,933
November	1,900	.....	22,800	11,567	.....	35,367	.....	.....	.....	.....	3,333	52,139
December	3,161	.....	22,484	8,839	6,032	40,516	.....	.....	.....	.....	3,266	38,781
1932—											7,742	48,258
January	3,871	1,710	14,452	3,774	5,710	29,548	.....	.....	.....	.....	.....	29,548
February	3,069	.....	9,103	4,862	.....	17,034	.....	.....	.....	.....	2,483	19,517
March	1,516	.....	6,065	.....	.....	7,581	.....	.....	.....	.....	.....	7,581
April	3,500	.....	19,333	3,867	4,833	31,533	.....	.....	.....	.....	.....	31,533
May	2,161	.....	15,226	18,774	3,871	40,032	.....	.....	.....	.....	.....	40,032

Gross Production of Crude Oil in the United States for 12 Months

(In Barrels of 42 Gallons)

1931—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
May:	Month	16,443,969	17,333,867	31,703,434	3,241,366	1,446,274	2,332,563	3,098,419	3,190,000	79,309,133
	Daily average	530,612	559,157	926,036	107,786	46,654	72,018	99,949	102,900	2,445,166
June:	Month	15,641,436	16,476,300	29,139,833	3,175,440	1,344,450	1,856,511	2,986,200	3,166,000	73,982,070
	Daily average	521,381	555,940	971,327	105,848	44,815	61,884	99,540	105,533	2,466,069
July:	Month	16,053,332	16,430,080	33,527,313	3,089,332	1,387,585	1,715,730	2,905,909	3,341,000	78,680,071
	Daily average	519,139	529,680	1,081,300	99,672	41,535	55,345	93,739	107,774	2,538,073
August:	Month	15,665,954	9,617,279	32,279,816	3,141,333	1,166,569	1,584,444	2,807,143	3,167,000	69,231,558
	Daily average	505,451	307,909	1,041,284	101,333	37,599	51,111	90,552	102,161	2,236,503
September:	Month	15,180,610	7,946,330	28,981,526	3,147,030	1,155,330	1,941,384	2,761,230	3,632,000	64,429,039
	Daily average	506,020	264,596	966,051	104,901	37,946	64,713	92,041	121,067	2,130,948
October:	Month	15,651,982	12,951,393	30,736,173	3,177,044	1,172,289	1,822,255	2,797,597	3,900,000	72,198,284
	Daily average	504,902	417,303	991,134	102,486	37,819	58,782	90,247	125,807	2,328,979
November:	Month	14,997,700	16,420,720	28,860,561	3,121,670	1,130,700	1,851,577	2,706,390	3,639,000	72,748,323
	Daily average	499,923	547,691	962,018	104,389	37,690	61,719	90,213	121,300	2,424,944
December:	Month	15,560,984	16,598,399	27,767,661	3,198,642	1,083,148	1,971,817	2,816,759	3,645,000	72,641,309
	Daily average	501,947	535,439	895,860	103,183	34,908	63,607	90,863	117,581	2,343,385
1932—										
January:	Month	15,532,141	13,664,149	26,410,318	3,170,587	1,101,616	1,792,398	2,444,164	3,566,000	67,681,373
	Daily average	501,037	440,779	851,944	102,277	35,536	57,819	78,844	115,032	2,183,270
February:	Month	14,616,562	11,806,150	23,858,275	2,838,839	1,008,562	1,617,087	2,420,224	3,294,000	61,460,139
	Daily average	504,030	407,110	822,703	97,891	34,778	55,762	83,456	113,586	2,119,315
March:	Month	15,575,915	12,997,618	26,162,647	3,042,929	1,062,897	1,703,145	2,617,392	3,553,000	66,715,543
	Daily average	502,445	419,278	843,956	98,159	34,287	54,942	84,432	114,613	2,152,114
April:	Month	15,524,000	12,718,020	25,555,442	2,974,080	1,048,620	1,858,957	2,525,040	3,684,000	66,188,159
	Daily average	517,000	423,934	851,848	99,136	34,954	61,965	84,168	122,800	2,206,272
Total 12 months		186,492,897	165,063,205	342,577,238	37,423,804	13,989,190	21,641,873	32,886,467	41,777,000	841,856,674

CLASSIFIED ADVERTISING

Classified Rates

The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional insertion. Six words usually constitute a line. The following table will enable you to figure the cost of your advertisement:

	1 time	2 times	3 times	4 times
3 lines ..	1.05	1.80	2.55	3.30
4 lines ..	1.40	2.40	3.40	4.40
5 lines ..	1.75	3.00	4.25	5.50
6 lines ..	2.10	3.60	5.10	6.60
7 lines ..	2.45	4.20	5.95	7.70
8 lines ..	2.80	4.80	6.80	8.80
9 lines ..	3.15	5.40	7.65	9.90
10 lines ..	3.50	6.00	8.50	11.00

For rates on Classified DISPLAY see opposite column.

Compute white space at the above rates.

Mail your Classified Advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

For Sale—Equipment

200 AMP. General Electric Arc Welder; portable; 220 V. 3 ph. 60 cy. Complete. Like new. $350. 7x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $225. 8x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $250. 36"x18' Fifield Screw Cutting Lathe. $650. Also large stock of lathes, shapers, pipe machines, bolt threaders, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, Ohio.

PIPE FOR SALE
20,000 ft. 8¼" 28-lb. Used Casing.
30,000 ft. 6⅝" 20-lb. Used Casing.
All Lapwelded, in A-1 condition.
Write or wire
I. Nadel,
134 E. 18th St.,
Tulsa, Okla.

GASOLINE PLANT BARGAINS
We are dismantling gasoline plant near Allen, Okla. Bargains in various size tanks, machinery and pipe. Phone L.D. 501 or write Tulsa.
PRODUCERS PIPE AND SUPPLY CO.

FOR SALE—Excellent 30 H.P. Stover oil engine, 18 ft. band wheel power. 22x40 galv. house. 150-barrel tank. Price $450. P.O. Box 38, Neosho Falls, Kansas.

FOR SALE—Young drilling engine, only used short time and in excellent condition priced at one-third its value. Address Box F-241, The Oil and Gas Journal, Tulsa, Okla.

A GASOLINE powered diamond core drill, also a good rotary. Address Box 242, The Oil and Gas Journal, Tulsa, Okla.

Equipment Wanted

WANTED—30,000 feet of plain end or screwed pipe from 4 to 10-inch, must be low price. Reply by letter stating shipping point. American Engineering Co., Chatham, Ontario.

GAS ENGINES WANTED—Two 25 H.P. engines for pumping oil wells. Muskegon Pipe Line Co., Muskegon, Mich.

Ranches and Farm Lands

BARGAIN for oil men or stockmen. 1,480 acres improved, 200 acres farm land, 1,279 acres finest Bluestem, never failing water. Oil structure and producing wells, 3,000 acres Bluestem, water and oil structure. William Mahannah, Latham, Kans.

Business Opportunities

FOR SALE
Kettleman Hills Field, California. 80 acres fee land within 1½ miles of Felix and Shell-Dixon wells for $150.00 an acre. Box 412, San Luis Obispo, Calif.

OIL located before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

ESTABLISHED EARNINGS
OIL PRODUCING COMPANY paying large monthly dividends from settled production, invites limited additional capital to drill out proven leases. No proration. Exceptional investment opportunity. Fullest investigation welcomed. Responsible representatives also desired to assist financing.
STEED PRODUCTION COMPANY
Fidelity Building Dallas, Texas

WE ARE organized to serve you—"In Mexico"—Oil, Mines, Lands, Concessions, Divorces.
International Business Bureau,
First National Bank Bldg.,
El Paso, Texas.

FOR SALE—About sixty acres of land with about twelve hundred feet frontage on Maumee River, Ironville, Toledo, Ohio, suitable for an oil refinery or other manufacturing purposes. The Craig Oil Company, Columbia Building, Pittsburgh, Pa.

REPORTS, Proven or wildcat operations Well Logs, Maps, etc., $1.00 each. Texas Oil Reporting Service, 717 Fidelity Bldg., Dallas, Texas.

Money Raising

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order. Valuations, Engineering, Geology.

FINANCE YOUR OWN project with shares bonded. Quickest, most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

JOHN MORRIS, 3608 WARREN ST., PHILADELPHIA, Pa., invites full facts first letter from capable parties planning negotiation of reasonable capital support for undertakings distinctly of higher order. Use registered mail, safeguard data.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 2443 N. W. 12th, Oklahoma City.

CORPORATE Organizing and Financing—confidential correspondence solicited.
BROOKWORTH,
110 East 42nd St., New York City.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form,
Evidence of Conception.
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER, ALLWINE & ROMMEL
Suite 418-815, 15th St., N.W.,
WASHINGTON, D. C.

Situations Wanted

PETROLEUM CHEMIST—Degree. Experience, 1½ years Humble Co., 2½ years Fuel Inspector, Missouri Pacific R. R. Married. 26. Will accept position anywhere. Address, W. G. Bohannon, Thorndale, Texas.

REFINER. Long experienced, Efficient, Energetic, Loyal, Sober. Expert on operation at Lowest cost. Now available. Address Box F-240, The Oil and Gas Journal, Tulsa, Okla.

DRILLING AND PRODUCTION
Superintendent, graduate engineer with exceptional qualifications desires position. Box 87, Laredo, Texas.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Wanted

OIL WANTED—Small refinery desires purchase oil in North Louisiana, Seminole, Okla., East Texas fields or other good crude that could be economically transported to plant. Standard Petroleum Products, Amite, La.

WANTED
Contacts with parties desiring East Texas crude at attractive price. Gaines Distributing Co., Longview, Texas.

Royalties—Production

MONTHLY INCOME-PAYING Royalties under Oklahoma City and Seminole Wilcox Sand wells offered. W. E. Cook, 342 Court Arcade, Tulsa, Oklahoma.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Okla.

CHEAP ROYALTIES—Shell-Humble midwest Blocks, Kans., Okla., Texas. Big list, agents wanted. Harry Haynes, Grantville, Kans.

UNUSUAL OPPORTUNITIES
FOR ROYALTY INVESTORS
AND DISTRIBUTORS
THE MERCURY COMPANY
Philtower Building, Tulsa, Oklahoma

JAMES B. McANALLY
Speculative & Investment Royalties
Hunt Bldg., Tulsa, Oklahoma
A service devoted exclusively to supplying opportunities to live wire brokers and dealers.
Information to Investors with address of nearest dealer on request.

Dealer in Odd Lots
PRODUCING OIL ROYALTIES
I Buy and Sell
John L. Dickson, Box 1114, Tulsa, Okla.

MONTHLY INCOME ROYALTIES for sale by owner, positive delivery, approximately 50% per annum returns, deeds one-quarter acre up. Inquiries promptly answered.
B. L. ABICHT,
609 Ritz Building, Tulsa, Oklahoma.

PRODUCING OIL ROYALTIES
Henry S. Severson, Court Arcade,
P.O. Box 1341, Tulsa, Okla.

FOR QUICK SALE—Half of 40 acres Royalty short term lease best structure in south Cleveland County, Okla. L. L. Smith, 230½ West Sixth Street, Okla. City, Okla.

ROYALTIES under and offsetting Gear wells Ellsworth County, Kansas. Leases and drilling blocks Ellsworth Arch. Also producing royalties in Okla., Kansas and Texas. Special service to brokers and investors. James R. Haynes, Grantville, Kansas.

$10 BUYS Royalty or Lease interest in West Texas active area. Anderson, 709 Linz Bldg., Dallas, Tex.

Leases—Production

HAVE several thousand acres POTASH lease located Southeast New Mexico, wish to make connection with party to core drill this. Roy G. Barton, Box 191, Clovis, New Mexico.

FOR SALE—Oil Lease, Royalty or Land in Fee, of the SW¼ of Sec. 23-19-9, Creek Co. Wire or write me offer. Settling up Estate. Must be sold. Henry Harman, Custer, Okla.

Display Rates

The rate for Classified Display Advertising set in similar style to this Ad or in two Column style is as follows for each insertion:

1 inch	1 time	$5.00
1 inch	13 times	4.50
1 inch	26 times	4.00
1 inch	52 times	3.50

Rates for Classified without display shown on opposite column.

One point borders and ten point capitals are allowed, larger type not accepted.

Changes in copy must be in our office 10 days in advance of publication date.

Mail your advertisement to the Largest Classified Section in the Oil Industry.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Leases—Production

MR. BROKER AND INVESTOR
Inquiries for leases, Royalties, Drilling Blocks and Oil Payments solicited. W. R. Miller, 1216 Hurley Ave., Ft. Worth, Tex.

NEW MEXICO Oil Leases, Lands and Royalties. Free State Map and information. Roy G. Barton, Clovis, New Mex.

DUVAL COUNTY, Government Wells oil district, 100 acres in Survey 133 for lease for continuous drilling and twenty-five dollars per acre bonus. Have other property to lease in same district. Also one-half of my royalty on 320 acres in southeastern Live Oak County for sale for seventeen dollars per acre. M. C. Hubberd, 203 Jackson Street, San Antonio, Texas.

WANTED TO CONTRACT
Ten thousand or more acres Kentucky Oil and Gas Leases. These leases will be new with all rentals paid up for one year straight. Commercial leases with titles proven. Ten cents per acre. If interested write A. J. McDowell, Monticello, Kentucky.

WILL LEASE 2 lots So. Okla. City, drill 90 days, 30,000 Bar. each side, sure shot. H. H. Houck, Admire, Ks.

FOR SALE—A valuable, producing Oil lease in eastern Kansas, shallow field. (Don't answer unless you mean business.) W. L. Morris Loan Co., Garnett, Kansas.

FOR SALE—Petroleum properties in Eastern Kansas shallow fields. Old settled production. Priced right. P. O. Box 38, Neosho Falls, Kansas.

FOR LEASE—Large drilling block in southeast Wyoming, subject to your geology. Believe we have oil. O. ETHERIDGE, Conroe, Texas.

LEASES, ROYALTIES and production wanted. Line pipe and casing for sale. Will buy pipe casing or old wells to be abandoned. Box 454, El Dorado, Kansas.

GEOLOGICALLY selected drilling blocks. No bonus. No fees. Nicolle, Box 903, Houston, Tex.

For Sale

"CRUDE OIL" East Texas crude oil will ship to any point, Fuel oil, Gas oil. Get our prices. East Texas Fuel Oil Co., 216 Forman Bldg., Longview, Texas.

Addresses Wanted

WANTED Fred Downey or anyone knowing his present address to communicate either with the undersigned at Tyler, Texas, or Banks & McLemore Attorneys, Longview, Texas. J. G. Reaves.

Here's Our FIVE!

If you believe, as we do, in boosting first for the prosperity of our own Mid-Continent: If you believe in keeping our home workmen busy: If you as a producer or operator prefer to give your business to a Mid-Continent concern and keep your money at home—then "Here's Our Five!"—a great big welcoming hand, backed with a real desire to serve you as you want to be served.

You'll find our prices on both new and used equipment well in line: every tool we sell you dependable, and exactly as represented, and our service available to you 24 hours of every day—including Sunday. Let's get better acquainted, for our mutual profit.

HYCHROME DRILL PIPE FLOATS

Insure Better Service

"Above all competition" is the unvaried opinion of every operator who has ever used Bridgeport Hychrome Drill Pipe Floats.

With the entire body, and collar, made by Bridgeport's exclusive Hychrome process, you are assured of exactly double the tensile strength of the usual steel. That means longer life, less re-threading of joints, and consequently faster and more profitable operation for you.

It will pay you to thoroughly investigate Bridgeport's Hychrome Drill Pipe Floats before you buy. Descriptive bulletin gladly sent on request.

WE WILL BUY

Good used complete rotaries, or separate units.
35 or 40 H.P. Oil or Gas Engines.
Casing and Line Pipe, all sizes.

Special Bargains on Boilers and Line Pipe

The following boilers are in good working condition, complete with stacks and hand hole plates, free from patches and blisters.

At Oklahoma City

1—115 H.P. 250-lb. W.P. Donovan Boiler.
1—100 H.P. 200-lb. W.P. Broderick Boiler.
1—73 H.P. 180-lb. W.P. Broderick Boiler.

At Kilgore, Texas, and Camps, Texas

4—73 H.P. 180-lb. W.P. Broderick Boilers.

At Pampa, Texas

1—35 H.P. 125-lb. W.P. Broderick Boiler.
2—100 H.P. 250-lb. W.P. Lucey Boilers (new).

At Breckenridge, Texas

1—40 H.P. 125-lb. W.P. Acme Boiler.

At Wichita, Kansas

1—45 H.P. 180-lb. W.P. Kewanee Boiler.

All boilers offered are subject to prior sale and F.O.B. present location. Call or wire us collect for quotations.

Special low prices on 22,704′ of 2″, 11,375′ of 3″ and 12,000′ of 4″ used line pipe in Wichita and McPherson, Kansas. Also 8,730′ of 2″, 895′ of 3″ and 5,700′ of 4″ used line pipe at Kilgore and Camps, Texas. Call or wire us collect for prices and further information.

BRIDGEPORT MACHINE COMPANY

Wichita, Kansas

Branches Conveniently Located in All Active Mid-Continent Oil Fields

BRIDGEPORT MACHINE COMPANY, Wichita, Kansas. Check here
Gentlemen: Please send me copy of your Free bargain list. ☐
I am in the market for .....
.....
.....(new) ☐ (used) ☐
Please advise me if you can supply me—also quoting your lowest delivered price to .....
Name .....
St. & No .....
City..... State.....

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